

An Epidemiologic Profile of HIV and AIDS in South Carolina 2012



Division of Surveillance and Technical Support
Bureau of Disease Control
South Carolina Department of Health and
Environmental Control

Executive Summary

In June 1981, the CDC published a report which documented five cases of *Pneumocystis carinii* pneumonia in otherwise healthy young men in Los Angeles, California; these would be considered the first cases of AIDS identified in the United States. That report would prompt AIDS case reports from other areas of the U.S. such as New York, San Francisco, and in 1982, South Carolina.

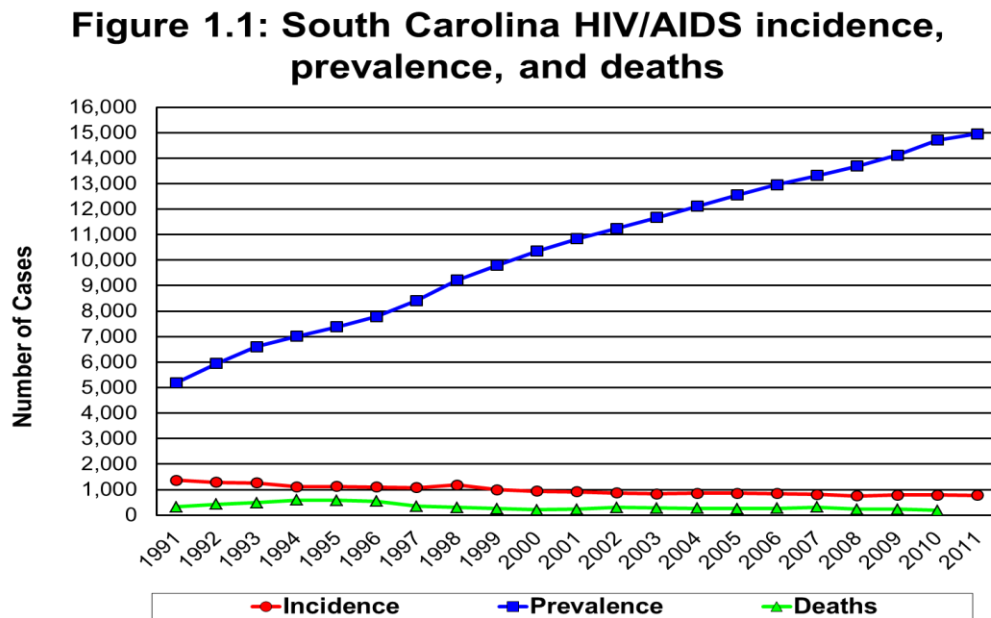
Since 1986, more than 25,404 people have been diagnosed with HIV infection (including AIDS) in South Carolina through December 2011. During 1985-1990 an average of 860 cases were diagnosed each year. In the subsequent three years (1991-1993), newly diagnosed HIV/AIDS cases averaged 1,306. The increase during this period was in part due to the artificial rise in AIDS cases as a result of the change in case definition in 1993. For the past five years, the annual number of new cases has been about 779. Many more people are infected but have not been tested.

Some of the changes over time in numbers of new cases are largely the result of reporting patterns or targeted testing initiatives. The initial steep rise in the epidemic reflects the early years when less was known about the transmission of HIV and effective medical treatments did not exist. As a result, infection rates increased and more HIV-infected individuals went on to develop AIDS. Most experts believe that when more was learned about HIV and the behaviors involved in its spread, effective prevention strategies reduced the overall number of new infections, and medical treatment, for some individuals, postponed the onset of AIDS. In more recent years, however, there is concern nationally that the epidemic may grow, particularly among young men who have sex with men.

Since 1994, new anti-retroviral drugs and strengthened care services have contributed to a decline in overall AIDS deaths. This decline is illustrated by the 184 deaths in 2010, a 29 percent drop from the 205 deaths in 2000. It is important to note that despite the decline in deaths due to AIDS and the apparent stabilization of the number of new HIV/AIDS cases diagnosed annually, the prevalence of HIV infection (the number of people estimated to be living with HIV/AIDS) is continuously increasing. The number of people living with HIV/AIDS at the end of each year has increased 44 percent from 2000 to 2011. It is also important to note that there are differences among certain populations in the number and rate of new and prevalent infections, as this profile will indicate.

Epidemiologic Profile

Figure 1.1 shows total incidence (the number of new cases within a specified time period), deaths and prevalence of HIV/AIDS cases in South Carolina since 1991.



The epidemic in South Carolina is primarily driven by sexual exposure, primarily among men who have sex with men and heterosexuals at risk. Injecting drug use appears to be diminishing as a risk for HIV.

African-Americans are disproportionately affected by HIV/AIDS and are over-represented among all risk populations.

Table of Contents

Executive Summary.....	i
Table of Contents.....	iii
List of Figures.....	v
Overview of Epidemiologic Profile	1
Definitions	2
Types and Quality of Data	3
Selected Data Source Description and Limitations:	4
DHEC, Enhanced HIV/AIDS Reporting Surveillance System (eHARS).....	4
HIV Counseling and Testing Program Data from DHEC Clinics	6
Ryan White Program Data Report	7
South Carolina Community Assessment Network (SCAN).....	7
U.S. Department of Health and Human Services (DHHS): National Survey on Drug Use and Health (NSDUH).....	7
Youth Risk Behavior Surveillance System (YRBSS).....	9
What are the sociodemographic characteristics of the population?	10
The State	10
Populations	10
Education & Earnings	11
Poverty Level.....	11
Employment.....	12
Housing	12
Summary	12
What is the impact of HIV/AIDS on the population?	13
Gender	13
Race/Ethnicity	14
Age	15
Risk Exposure	16
Residence	18
Mortality	19

Who is at risk for becoming infected with HIV?	21
Characteristics of HIV/AIDS in People at Highest Risk.....	21
Men who have Sex with Men	22
Estimates of Men Who Have Sex with Men Behavior in South Carolina	22
Characteristics of men who have sex with men	22
Summary	23
High Risk Heterosexuals.....	24
Estimates of High-Risk Heterosexual Behavior in South Carolina	24
Characteristics of high risk heterosexuals	24
Summary	26
Injecting Drug Users.....	27
Characteristics of Injecting Drug Users.....	27
Other Populations at Risk	29
People with Sexually Transmitted Diseases (STDs)	29
Chlamydia.....	29
Gonorrhea	30
Infectious Syphilis	30
Infants and Children: (Children under 13 years of age).....	31
Perinatally HIV exposed births.....	32
Teenage Pregnancy	32
People Receiving HIV Counseling and Testing At County Health Departments.....	33
Other Behavioral/Risk Data	34
Behavioral Risk Factor Surveillance System (BRFSS)	34
Youth Risk Behavior Survey (YRBS)	34
Substance Use	35
What are the patterns of service utilization of HIV-infected people?	36
Ryan White Part B	36
AIDS Drug Assistance Program (ADAP)	37
In Care vs. Not In Care.....	38

List of Figures

Figure 1.1	South Carolina HIV/AIDS incidence, prevalence, and deaths
Figure 1.2	Selected demographic information South Carolina and United States
Figure 1.3	S.C. household income by race and Hispanic origin
Figure 1.4	Percent of each racial/ethnic pop. living below federal poverty level
Figure 1.5	Selected access indicators S.C. and U.S.
Figure 2.1	Disproportionate S.C. HIV impact by sex
Figure 2.2	HIV/AIDS case rate per 100,000 for males and females, 2001-2011
Figure 2.3	Proportion of persons living with HIV/AIDS by race/ethnicity, 2011
Figure 2.4	Disproportionate HIV impact by race/ethnicity/gender, S.C.
Figure 2.5	S.C. HIV/AIDS prevalence rates by race/gender, 2001-2011
Figure 2.6	S.C. HIV/AIDS case rates by race/gender and year of diagnosis, 2001-2011
Figure 2.7	Disproportionate S.C. HIV impact by age
Figure 2.8	S.C. HIV/AIDS case rate per 100,000 by age by year of diagnosis, 2001-2011
Figure 2.9	Proportion of persons living with HIV/AIDS by risk exposure, 2011
Figure 2.10	Proportion of HIV/AIDS cases by risk exposure, 2010-2011
Figure 2.11	Comparison of no risk identified cases with total S.C. HIV/AIDS reported cases, 2010-2011
Figure 2.12	Proportion of male HIV/AIDS cases by exposure category, diagnosed 2010-2011
Figure 2.13	Proportion of female HIV/AIDS cases by exposure category, diagnosed 2010-2011
Figure 2.14	Proportional distribution of male HIV/AIDS cases by exposure category, diagnosed 2000-2011
Figure 2.15	Proportional distribution of female HIV/AIDS cases, by exposure category, diagnosed 2000-2011
Figure 2.16	S.C. HIV prevalence rates (per 100,000 population) cases currently living, 2011 African-American
Figure 2.17	S.C. HIV/AIDS incidence rates (per 100,000 population) 2009-2011 average of cases African-American
Figure 2.18	S.C. HIV prevalence rates (per 100,000 population) cases currently living, 2011 whites
Figure 2.19	S.C. HIV/AIDS incidence rates (per 100,000 population) 2009-2011 average of cases whites
Figure 2.20	Deaths among persons with AIDS in South Carolina, 1990-2010
Figure 2.21	Characteristics of persons who died of AIDS, 2010

Epidemiologic Profile

Figure 2.22	Number of persons who died of AIDS by health region, 2010
Figure 3.1	Number of persons presumed living with HIV/AIDS at end of year by risk, 2001-2011
Figure 3.2	Number of HIV/AIDS cases by year of diagnosis and risk, 2001-2011
Figure 3.3	Proportion of men with HIV/AIDS who have sex with men by race/ethnicity, diagnosed 2010-2011
Figure 3.4	Percent of MSM HIV/AIDS cases diagnosed 2010-2011 by age group & race
Figure 3.5	Percent of MSM living with HIV/AIDS by age/race, 2011
Figure 3.6	S.C. HIV/AIDS prevalence by MSM exposure category, 2011 reported cases by county
Figure 3.7	Proportion of heterosexual HIV/AIDS cases by race/ethnicity, diagnosed 2010-2011
Figure 3.8	S.C. HIV/AIDS cases attributed to heterosexual transmission, by sex and year of diagnosis
Figure 3.9	Percent heterosexual S.C. HIV/AIDS cases diagnosed 2010-2011 by age/race/sex
Figure 3.10	Percent of heterosexuals living with HIV/AIDS by age group and race/sex, 2011
Figure 3.11	S.C. HIV/AIDS prevalence by heterosexual contact exposure category, 2011 reported cases by county
Figure 3.12	S.C. HIV/AIDS incidence rates (per 1000,000 population) 2009-2011 average of cases - Females
Figure 3.13	Proportion of injecting drug users diagnosed with HIV/AIDS 2010-2011 by race/sex
Figure 3.14	Number of HIV/AIDS cases due to injecting drug use by sex and year of diagnosis, 2001-2011
Figure 3.15	Percent of injecting drug users diagnosed with HIV/AIDS 2010-2011 by age
Figure 3.16	Percent of IDU persons presumed living with HIV/AIDS by race/sex and age group, 2011
Figure 3.17	S.C. HIV/AIDS prevalence by injection drug users exposure category, 2011 reported cases by county
Figure 3.18	Number of children <13 years old diagnosed with HIV/AIDS in South Carolina, 1991-2011
Figure 3.19	Perinatally HIV exposed births by year of birth and rate by race and year of birth
Figure 3.20	South Carolina reported Chlamydia cases by year of diagnosis, 2001-2011
Figure 3.21	Proportion of 2011 reported Chlamydia cases by year of diagnosis by age
Figure 3.22	South Carolina reported gonorrhea cases by year of diagnosis, 2001-2011
Figure 3.23	Proportion of 2011 reported Gonorrhea cases by year of diagnosis by age

Epidemiologic Profile

Figure 3.24	South Carolina reported Infectious Syphilis cases by year of diagnosis, 2001-2011
Figure 3.25	Proportion of 2011 reported Infectious Syphilis cases by year of diagnosis by age group
Figure 3.26	South Carolina teenage live birth rates, ages 15 - 17
Figure 3.27	South Carolina teenage live birth rates, ages 18 - 19
Figure 3.28	Proportion of YRBS students indicating sexual risks, 2005-2011
Figure 4.1	Characteristics of Ryan White Part B clients compared to S.C. persons living with HIV/AIDS in 2011
Figure 4.2	South Carolina Ryan White Part B Service Utilization by Service Type, 2011
Figure 4.3	2011 ADAP Patient Profile Compared to Persons Living with HIV/AIDS
Figure 5.1	S.C. HIV/AIDS cases estimated not in care vs. in care
Figure 5.2	S.C. HIV/AIDS cases estimated not in care diagnosed through 2011 HIV-only vs. AIDS
Figure 5.3	S.C. HIV/AIDS cases diagnosed through 2011, comparison within select demographics estimated percentage not in care
Figure 5.4	S.C. HIV/AIDS Cases NOT in care diagnosed through 2011 by mode of exposure
Figure 5.5	S.C. HIV/AIDS cases diagnosed through 2011 comparison within mode of exposure in care vs. not in care
Figure 5.6	S.C. HIV/AIDS cases estimated not in care diagnosed through 2011 by location
Figure 5.7	S.C. HIV/AIDS Cases NOT in care diagnosed through 2011 by county

Overview of Epidemiologic Profile

The purpose of this Epidemiologic Profile is to provide information to the S.C. HIV Planning Council on the number and characteristics of people becoming HIV infected in order to target and prioritize HIV prevention activities.

This Epidemiologic Profile includes a list of definitions and describes the data sources used, the limitations of each data type, and presents the data in order to answer the following questions:

What are the socio-demographic characteristics of the population?

What is the impact of HIV/AIDS on the population?

Who is at risk for becoming infected with HIV?

What is the geographic distribution of HIV infection? *

What are the patterns of service utilization of people living with HIV/AIDS?

What are the characteristics of people who know they are HIV-positive but who are not in HIV primary care?

These questions will be explored through analyses of currently living with HIV/AIDS (prevalence) and newly diagnosed (incidence) HIV/AIDS cases; a description of seroprevalence data from HIV counseling and testing sites and other studies; a summary of other risk behavior profiles and community-based HIV risk assessment information; and a discussion of related sociodemographic, health and risk behavior indicators.

Definitions

AIDS – Acquired Immunodeficiency Syndrome, the end stage of HIV infection characterized by life-threatening or severely disabling disease.

HIV – Human Immunodeficiency Virus, the cause of HIV infection.

HIV/AIDS – Includes those people with HIV infection, as well as those who have progressed to AIDS. Unless noted, most HIV data in this profile includes people diagnosed with AIDS.

HIV Only – Includes only people with HIV infection who did not develop AIDS within 365 days of report of positive HIV test.

Health Professional Shortage Area (HPSA) – Many South Carolinians live in areas where obtaining health care is difficult because health care providers are in short supply. The Department of Health and Human Services (HHS) uses a Health Professional Shortage Area (HPSA) designation system to identify areas facing a critical shortage of primary medical, dental, or mental health care professionals.

Incidence – The number of new HIV/AIDS cases newly diagnosed and reported each year. Incidence cases may be combined in two or three year periods.

Incidence Rate – Number of new cases occurring during a period of time, divided by the annual average population, multiplied by 100,000. It is a measure of the frequency with which an event (e.g. new HIV/AIDS cases) occurs in a population over a period of time. It is also a measure of risk of getting the disease.

Natural Breaks (Jenks) – Is a data classification method designed to determine the best arrangement of values into different classes. This is done by seeking to minimize each class's average deviation from the class mean, while maximizing each class's deviation from the means of the other groups.

Other Risks – In relation to Risk Exposures, the term “Other” or “Other Risks” is used to describe a group of risks which include such categories as: hemophilia, blood transfusion, and perinatally acquired infection.

Prevalence – The number or proportion of people estimated to be living with HIV/AIDS at the end of a particular period of time (e.g. year).

Prevalence Rate – Total number of living HIV/AIDS cases (both old and new cases) during the year of report, divided by the annual average population multiplied by 100,000. It is the proportion of people in a population who have a particular disease or attribute at a specified point in time (or specified period of time).

Epidemiologic Profile

Rates are used to:

- measure the frequency of disease (in this case, HIV/AIDS) or other outcomes of interest,
- describe the distribution of disease occurrence in human populations,
- allow comparison of the risk of disease or burden of disease across populations,
- characterize the risk of disease for a population, and
- identify determinants of disease.

They may also be used to help:

- prioritize prevention programs among competing causes,
- identify target groups for intervention,
- acquire funding for resources, and
- compare events across geopolitical boundaries.

Types and Quality of Data

Because no one epidemiologic data set will provide a complete picture of HIV/AIDS in the community, or the state for that matter, we have assembled data from several categories and sources. Data from a variety of categories provide a more accurate picture of past, present and future HIV/AIDS infection trends. Keeping in mind that not all data are equal, data sources must be considered in the context of their objectives, strengths and limitations; who the target populations are; how the data were collected; and the validity of the data.

As described above, several data sets are used to illustrate the South Carolina populations diagnosed with HIV/AIDS and to characterize the nature of risk-taking behaviors. All of these data sets share limitations or have similar types of bias introduced, in that most are reported by third parties, largely providers, who must seek information from the affected individual as to illness, transmission mode, and demographic characteristics. These reports are limited both by the willingness of providers to ask about these factors and that of clients to report on personal behaviors. These data are also limited in their ability to broadly characterize populations. For instance, STD (sexually transmitted disease) or HIV/AIDS case report data can only characterize people with STD or HIV who seek treatment, or data on estimated condom use among women cannot characterize all women but only those who agree to participate in selected behavioral surveys. Individuals who seek treatment for STD (and who are offered HIV testing) may be very different from those individuals who do not. However, each of the data sets referred to in this profile provide information to describe the relative risk and impact of this disease on the people of South Carolina.

The following summarizes data sources, and limitations, used by the data work-group to complete the South Carolina Epidemiologic Profile of HIV/AIDS.

Selected Data Source Description and Limitations:

DHEC, Enhanced HIV/AIDS Reporting Surveillance System (eHARS)

All health care providers, hospitals, and laboratories in South Carolina are required to report people diagnosed with confirmed HIV infection and/or AIDS. Each year approximately one-third of new cases are reported from county health departments, one-third from hospitals, one-fifth from physicians, and the remainder from state/federal facilities (including prisons) and laboratories. DHEC's surveillance system, eHARS, serves various functions: 1) monitoring the incidence and demographic profile of HIV/AIDS; 2) describing the modes of HIV transmission among people with HIV/AIDS; 3) guiding the development and implementation of public health intervention and prevention programs; and 4) assisting in evaluating the efficacy of public health interventions. It is the principal source of knowledge regarding trends in the number and characteristics of HIV-infected people. It includes people in all age, gender, race/ethnic, and mode-of-HIV-exposure groups; and it provides a historical perspective in trends dating to the earliest recognition of the AIDS epidemic.

This profile primarily presents data on the total infection/disease spectrum: HIV infection including AIDS (not AIDS alone). Because of the long and variable period from HIV infection to the development of AIDS, trends in AIDS cases data do not represent recent HIV infections or all HIV-infected people. AIDS surveillance data do not represent people whose HIV infection is not recognized or diagnosed. AIDS cases have declined nationwide; however, because AIDS surveillance trends are affected by the incidence of HIV infection, as well as the effect of treatment on the progression of HIV disease, future AIDS trends cannot be predicted.

Because trends in new diagnoses of HIV infection are affected when in the course of disease a person seeks or is offered HIV testing, such trends do not reflect the total incidence of HIV infection in the population. In addition, because not all HIV-infected people in the population have been diagnosed, these data do not represent total HIV prevalence in the population. Interpretation of these data is complicated by several factors, ranging from a person having both HIV then AIDS diagnoses in the same year, varying time between reporting HIV and AIDS cases, and numerous reasons why the number of new HIV diagnoses changed (increased, decreased, or stable).

Some data is provided on HIV infection-only (people reported with HIV infection who do not have an AIDS diagnosis within 365 days of being diagnosed with HIV). This data, while highly dependent on people seeking or receiving HIV testing early in their infection stages, provide an opportunity to compare people presumably infected more recently with those infected as long as ten or so years ago (AIDS diagnosis).

Risk categories are assigned similar to the methods described above in HIV Counseling and Testing. There are some slight differences in the type of categories between HIV/AIDS surveillance reports and HIV Counseling and Testing reports. In South Carolina, about 26 percent of adult/adolescent HIV infection/AIDS cases reported in 2011 did not have risk categories reported. These cases are defined as "No Identified Risk"- (NIR). The proportion of

Epidemiologic Profile

NIR cases has been increasing nationally as well. The primary reason for incomplete risk information (NIRs) is that reports from laboratories do not include risk and an increasing proportion of cases result from heterosexual transmission but are not able to be defined in CDC's definition of heterosexual transmission. For example, people who report having multiple heterosexual partners or who have sex for money/drugs but the status of their partners is not known, are not classified as "heterosexual", they are "No Identified Risk".

DHEC, Sexually Transmitted Diseases Management Information System (STD*MIS)

Health care providers and laboratories are required by law to report certain sexually transmitted diseases (including syphilis, chlamydia, gonorrhea, chancroid, hepatitis) to DHEC. A sexually transmitted disease, other than HIV infection, represents a visible and immediate health problem that stems from unprotected intercourse with an infected partner. Research from several studies strongly indicates that STDs increase the possibility of acquiring and transmitting HIV infection. The emerging problem of heterosexual HIV transmission in the South closely parallels that of syphilis and gonorrhea. Gonorrhea, syphilis, and chlamydia incidence and prevalence data are used by programs to: 1) monitor local, and state trends; 2) identify high-risk groups and geographic areas in which unsafe sexual behaviors occur, 3) guide the development and implementation of public health intervention and prevention programs; and 4) assist in evaluating the efficacy of public health interventions.

Considering the short incubation periods for these infections, gonorrhea, syphilis, and chlamydia incidence represent recent consequences of unsafe sexual behavior and point to populations who are potentially at very high risk for acquiring and transmitting HIV infection. Unfortunately, an often unrecognized aspect of STDs, including bacterial STDs, is how frequently people with these infections have no symptoms or do not recognize symptoms. Most studies of STDs are conducted in health-care settings specifically for people who do recognize symptoms; therefore, these studies usually overestimate the proportion of infected people who are symptomatic. Studies of STD screening in non-health-care settings (e.g., jails, workplaces, and communities) or health-care settings where STD treatment is not the primary function (e.g., family-planning clinics) suggests that most people with gonorrhea or chlamydia are asymptomatic.

Limitations: STD data lack much information that would help to better understand HIV risk, such as mode of transmission. Also, bias is introduced for some diseases, such as chlamydia, where screening of asymptomatic people is done much more frequently in women than in men. For example, all women <25 years attending family planning and STD clinics in county health departments are routinely screened for chlamydia and gonorrhea. Also, there may be bias in that the majority of reports are from public clinics; the personal nature of STD's may affect providers' willingness to report. This may account, in part, for the likelihood of some STDs to occur at much higher rates among African-Americans who are more likely to seek care in public clinics, where there is more complete reporting.

HIV Counseling and Testing Program Data from DHEC Clinics

Counseling and testing data, while highly informative about people who seek counseling and testing, does not tell us anything about people who do not seek testing or choose not to test. All states provide HIV counseling and testing services and maintain data to quantify HIV counseling and testing services delivered in publicly-funded sites and to determine the characteristics of people receiving those services. These data are used by prevention programs to plan and target services for high-risk individuals. The type of data collected in South Carolina includes the counseling and testing site type, number of clients tested and number positive for each risk group, number tested, number positive by type of test site, and number tested and number positive by race/ethnicity gender, and age group. Clients receive confidential counseling and testing in each of the 46 county health department clinics.

The counseling and testing data system is standardized and has been in place for several years. Data in this Epi-Profile reflect number of individual clients tested during a specific period of time. People who received multiple tests during the report period are only counted once. It includes people tested in family clinics, maternity clinics, TB, STD clinics and people voluntarily requesting services or referred through partner counseling services. Approximately one third of the total of newly diagnosed and reported people with HIV infection each year is from DHEC counseling and testing sites. People tested in other settings, such as physician offices, hospitals, state facilities, etc. are not included in the DHEC counseling and testing database.

To determine a client's level of risk, each person is assigned a risk status: men who have sex with men (MSM), injection drug use (IDU), or heterosexual contact with a person at risk for or infected with HIV. Since most clients acknowledge multiple risks, risk status is determined by using the CDC's hierarchy of risk. This process assigns the client's "highest" risk. The highest possible risk in the hierarchy is sex with a person with HIV/AIDS, while the least significant risk is "no acknowledged risk". A person is only represented in their highest risk category regardless of how many risks the client acknowledges.

The CDC's hierarchy of risk includes a category for the combined risks of MSM and IDU; in previous HIV/AIDS Epidemiologic Profiles, the combined risks of MSM and IDU have been grouped and reported within the single category of 'Injection Drug Use'. This report leaves the combined risks of MSM and IDU as a stand-alone category. This CDC risk hierarchy can limit interpretability of data; it also does not reflect associated risks such as other non-injecting substance use, i.e. crack-cocaine.

Counseling and testing data in South Carolina and nationally is distinct from blinded, HIV seroprevalence surveys which generate an estimate of HIV seroprevalence that is unbiased by client self-selection. The DHEC counseling and testing system only includes clients who seek out counseling and testing services or agree to be tested after consultation with a counselor at a clinic site. However, for those clinic sites in which clients can obtain services other than counseling and testing for HIV, and in which all or nearly all clients actually receive HIV testing, (for example, maternity and STD clinics), data for those sites approximates the reliability of the blinded surveys.

Ryan White Program Data Report

The Ryan White HIV/AIDS Program Data Report (RDR) is an annual report that captures information regarding the services provided by all Ryan White funded entities. The RDR is divided into sections including: service provider information; client information; service information; HIV counseling and testing; and medical information. Providers report on all clients who received services eligible for Ryan White Parts A, B, C or D funding, regardless of the actual funding source used to pay for those services. The South Carolina Ryan White Part B contractors complete the RDR forms and submit them to DHEC. DHEC assembles all of the reports and submits the data to Health Resources and Services Administration (HRSA).

South Carolina Community Assessment Network (SCAN)

Its purpose is to provide basic reference data for a variety of users. The primary use of SCAN is to enumerate and characterize mortality attributed to HIV infection. The data were also used to compare trends in HIV infection mortality with other leading causes of death and to characterize the impact of HIV infection on mortality. Data on causes of death are based on information recorded by hospitals, physicians, coroners, midwives and funeral directors. Recorded information may be inaccurate or incomplete due to underreporting of certain causes of deaths, the number of HIV-related deaths and the conditions may be underestimated. Vital statistics data are not as timely as AIDS case reports due in part to processing time. SCAN is also used to enumerate and characterize birth attributes.

U.S. Department of Health and Human Services (DHHS): National Survey on Drug Use and Health (NSDUH)

The National Survey on Drug Use and Health is an annual nationwide survey involving interviews with approximately 70,000 randomly selected individuals aged 12 and older. The Substance Abuse and Mental Health Services Administration (SAMHSA), which funds NSDUH, is an agency of the U.S. Public Health Service in the U.S. Department of Health and Human Services (DHHS). Supervision of the project comes from SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ).

Through a competitive bidding process, SAMHSA selected Research Triangle Institute (RTI) to conduct the NSDUH through 2013. RTI has successfully conducted the survey since 1988. RTI's role in this long-term national effort includes study design, sample selection, data collection, data processing, analysis, and reporting.

Epidemiologic Profile

Data from the NSDUH provide national and state-level estimates on the use of tobacco products, alcohol, illicit drugs (including non-medical use of prescription drugs) and mental health in the United States. To assess and monitor the nature of drug and alcohol use and the consequences of abuse, NSDUH strives to:

- provide accurate data on the level and patterns of alcohol, tobacco and illegal substance use and abuse;
- track trends in the use of alcohol, tobacco, and various types of drugs;
- assess the consequences of substance use and abuse; and
- identify those groups at high risk for substance use and abuse.

A scientific random sample of households is selected across the United States, and a professional RTI interviewer makes a personal visit to each selected household. After answering a few general questions during the in-person visit by the interviewer, one or two residents of the household may be asked to participate in the survey by completing an interview. Since the survey is based on a random sample, each selected person represents more than 4,500 United States residents.

Participants complete the interview in the privacy of their own home. A professional RTI interviewer personally visits each selected person to administer the interview using a laptop computer. Individuals answer most of the interview questions in private and enter their responses directly into the computer so even the interviewer does not know the answer entered. For some items, the interviewer reads the question aloud and enters the participant's response into the computer.

Each interview data file – identified only by a code number – is electronically transmitted to RTI on the same day the interview is conducted. Combined with all other participants' answers, the data are then coded, totaled, and turned into statistics for analysis. As a quality control measure, participants may receive a telephone call or letter from RTI to verify the interviewer completed the interview with them in a professional manner.

Youth Risk Behavior Surveillance System (YRBSS)

The Youth Risk Behavior Survey (YRBS) was developed cooperatively by the Centers for Disease Control and Prevention (CDC), several federal agencies, and state departments of education to measure the extent to which adolescents engage in health risk and health enhancing behaviors. The system consists of national, state, and local school-based surveys. In South Carolina, the YRBS consists of questionnaires administered to middle school (6th-8th grade) and high school (9th-12th grade) students in the public school system. A two-stage sampling process is used to provide a state-wide sample at each level. In the first stage, regular public schools with any of the target grades are sampled with probability proportional to the school enrollment. In the second stage, intact classes are sampled randomly and all students in these classes are eligible to participate. The overall response rate is calculated as the percentage of sampled schools that participate multiplied by the percentage of sampled students that complete useable surveys. If this overall response rate is 60% or greater, the resulting data are weighted to be representative of the state as a whole.

There are 367 private K-12 schools in South Carolina (S.C. Statistical Abstract, 2003/04). However, none of them are included in the survey. Also, while schools are randomly selected for participation some may choose not to participate.

The survey includes questions about injury and violence, tobacco use, alcohol and other drug use, sexual risk behaviors, physical activity, and nutrition behaviors (the specific questions can vary from year to year).

This survey is conducted by S.C. Healthy Schools at the Department of Education, and relies heavily on surveillance methods and self-reports; so it depends on how well respondents understand the questions and how well they can accurately and honestly answer the question. However, the questionnaire has demonstrated good test-retest validity and the data are edited, checked and weighted. These data are representative of only public middle school students (grades 6-8) or public high school students (grades 9-12) in South Carolina.

What are the sociodemographic characteristics of the population?

The HIV epidemic in the United States, and in South Carolina, is a composite of multiple, unevenly distributed epidemics in different regions and among different populations. These populations may comprise people who practice similar high-risk behavior, such as injecting drugs or having unprotected sex with an infected person. Although race and ethnicity are not risk factors for HIV transmission, they are markers for complex underlying social, economic, and cultural factors that affect personal behavior and health. Low socioeconomic status is associated with increased disease morbidity and premature mortality. Unemployment status is correlated to limited access to health care services, resulting in increased risk for disease. This section provides background information on South Carolina's populations and contextual information, i.e. education, poverty level, housing, etc, for assessing potential HIV impact. The social, economic, and cultural context of HIV infection must be considered when funding, designing, implementing and evaluating HIV prevention programs for diverse populations.

The State

South Carolina lies on the southeastern seaboard of the United States. Shaped like an inverted triangle, the state is bounded on the north by North Carolina, on the southeast by the Atlantic Ocean, and on the southwest by Georgia. It ranks 40th among the 50 states in size and has a geographic area of 30,061 square miles. South Carolina has a diverse geography that stretches from the Blue Ridge Mountains in the northwest corner to the beaches along the Atlantic coast. There are 46 counties grouped into eight public health regions. Columbia, located in the center of the state, is the capital and the largest city. There are 3 metropolitan areas with a population of 500,000 or more: Columbia, Charleston and Greenville areas. Manufacturing is the state's leading industry, followed by tourism and forestry.

Populations

Based on Census Bureau data, the total number of South Carolinians was 4,679,230 (2011 estimate). Of this total, 64 percent were Caucasian, 28 percent were African-American, 0.5 percent were Native American/Alaskan, 1.4 percent were Asian and Pacific Islander and 5.3 percent were of Hispanic origin. Fifty-one percent were female and 49 percent were male. 76 percent of the population distribution in South Carolina is defined as metropolitan, 24 percent is non-metropolitan. The proportion of people who completed a bachelor degree, or higher, is 24 percent; lower than the U.S. proportion of 28 percent (Figure 1.2).

**Figure 1.2: Selected demographic information
South Carolina and United States**

	South Carolina	United States
Population (2011 est.)	4,679,230	311,591,917
Proportion of Persons Living in Non-Metropolitan Areas, 2010	24%	16%
Median Age, 2010	37.8	37.2
Racial/Ethnic Distribution of Pop. (2011 est.)		
White	64%	63%
Black	28%	13%
Hispanic	5%	17%
Educational Attainment 2009		
High school grad. or higher	84%	85%
Bachelor's degree or higher	24%	28%
Unemployment Rate, 2011	9.6%	8.5%
Median Household Income, 2010	\$42,018	\$50,046

Sources: U.S. Census Bureau.

Epidemiologic Profile

Education & Earnings

Despite the economic strides made in recent years, South Carolina remains among the states with the highest percentage of people who live below the poverty level (8th of fifty states and District of Columbia). Educational attainment is strongly correlated with poverty, and South Carolina continues to rank low in percent of people over 25 years of age who have bachelor's degrees or higher (38th of fifty states and District of Columbia). Just over sixteen percent (16.4 percent) of the population has less than a high school education. By race, 15.5 percent of the white population in South Carolina over the age of 25 had an educational attainment of less than a high school diploma. The same is true for 26.7 percent of the African American population as well as 25.8 percent of other races (other includes Asian, Pacific Islanders and Native Americans).

In comparison, African-Americans, people of Hispanic origin, and other races have lower per capita incomes, averaging 18 percent below the state's mean income, while Asian and whites earned 18 percent above the state's mean income. The same is true when median income is used for comparison: Blacks, Hispanics, and other races have lower median incomes, averaging 20 percent below the state's median income, while Asian and whites earned 25 percent above the state's median income. (Figure 1.3).

**Figure 1.3: S.C. household income
by race and ethnicity**

	Per Capita (mean) Income (2010 Inflation-Adjusted Dollars)		Median income* (2010 Inflation-Adjusted Dollars)	
	Estimate	Relative to African- Americans	Estimate	Relative to African- Americans
White (non-Hispanic)	\$ 26,733	1.9	\$ 49,163	1.8
Asian	\$ 25,647	1.8	\$ 52,406	1.9
American Indian/Alaska Native	\$ 17,825	1.3	\$ 36,750	1.3
African-American	\$ 13,885	1.0	\$ 27,643	1.0
Hispanic or Latino origin (of any race)	\$ 11,837	0.9	\$ 33,529	1.2
Native Hawaiian/Other Pacific Islander	\$ 8,897	0.6	\$ 25,446	0.9
South Carolina Overall :	\$ 22,128	1.6	\$ 43,508	1.6

* Median income is a more useful measure of income distribution than per capita income because it is less influenced by upper or lower extremes.

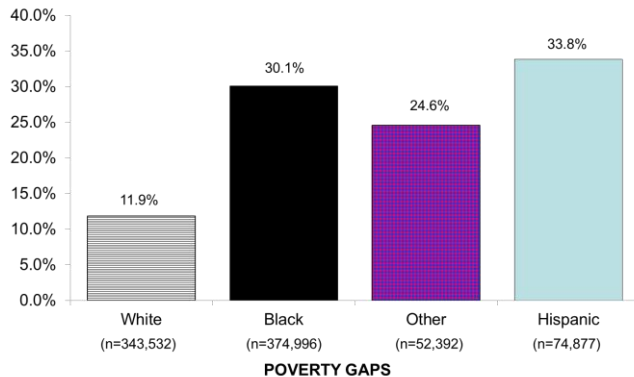
Data Sources: U.S. Census Bureau

Poverty Level

Based on 2011 Census data, approximately 18.2 percent of South Carolinians lived below the poverty level (ranking 8th in the US); with 13.8 percent of South Carolina families living below the poverty level.

Epidemiologic Profile

Figure 1.4: Percent of each racial/ethnic pop. living below federal poverty level: S.C. 2010



Data Source: U.S. Census Bureau, American Community Survey.

An estimated thirty percent of African-American South Carolinians were below poverty in 2011, compared to 34 percent of people of Hispanic descent, 13 percent among whites and close to 25 percent of people categorized as Other, which includes Asian, Pacific Islanders and Native Americans (Figure 1.4).

Insurance/Access to Primary Care

Almost eighteen percent (17.5 percent) of South Carolinians do not have health insurance coverage. In South Carolina, all or part of forty-five (out of forty-six) counties are designated as Health Professional Shortage Areas (HPSA). An estimated 1,253,951 South Carolinians live in HPSAs; or approximately 27.1 percent of the South Carolina's population, compared to 17.7 percent of the total U.S. population (Figure 1.5).

Figure 1.5: Selected access indicators, S.C. and U.S.

	South Carolina	United States
Total Pop. Uninsured, 2010	17.5%	15.5%
Individuals Below 200% Poverty Level, 2010	39.6%	34.4%
Population living in a Primary Care Health Professional Shortage Area, 2012	27.1%	17.7%
Women Receiving 1 st Trimester Prenatal Care, 2009 (for U.S., only 22 States provided data)	65.6%	35.7%
Medicaid Enrollment as Percent of Total Population, 2009	20.0%	20.0%

Source: U.S. Dept. of Health and Human Services; HRSA; SCDHEC PHSIS; Kaiser Family Foundation.

Employment

South Carolina's unemployment rate at the end of 2011 was 9.6 percent, higher than the US rate of 8.5 percent. The median household income (in 2011 inflation adjusted dollars) was \$43,508 vs. the US median income of \$50,046.

Housing

According to the US Census, in 2011, 69 percent of the state's homes were owned. The S.C. Council on Homelessness estimates 4,701 people are homeless in South Carolina.

Summary

South Carolina, as many southern states, ranks high for poverty, low educational attainment and uninsured population compared to other US states. These factors can affect one's ability to access prevention and health care services and adhere to regimens for treatment and care of diseases that may lead to more severe consequences.

What is the impact of HIV/AIDS on the population?

In the United States, HIV/AIDS remains a significant cause of illness, disability, and death, despite declines in new AIDS cases and deaths from 1995 to 2011. Current surveillance activities provide population-based HIV/AIDS data for tracking trends in the epidemic, targeting and allocating resources for prevention and treatment services, and planning and conducting program evaluation activities.

In South Carolina, AIDS cases have been reported since 1981, and confirmed cases of HIV infection have been reportable since February 1986. During the calendar year of 2011, according to the CDC HIV/AIDS Surveillance Report, South Carolina ranked 7th among states, the District of Columbia, and U.S. dependent areas with an AIDS case rate of 15.5 per 100,000 population. The epidemic is continuing to grow with an average of 65 cases of HIV infection reported each month during the past year. As of December 31, 2011, among South Carolina residents 14,945 people have been reported living with HIV infection (including AIDS).

This section summarizes the overall toll of the epidemic in South Carolina based on total reported HIV/AIDS cases and deaths.

Gender

Figure 2.1 shows the impact of HIV on the men and women in South Carolina. Men unequivocally are disproportionately affected by HIV/AIDS. They make up 49 percent of South Carolina's total population, but comprise 70 percent of people living with HIV/AIDS (prevalence). HIV/AIDS diagnosed cases during the two-year period 2010-2011 gives an estimate of more recent infections or potentially emerging populations.

Figure 2.1: Disproportionate S.C. HIV impact by sex

SEX	No. (%) S.C. Total Population, 2011 est.	No. (%) of Total Estimated Living With HIV/AIDS, 2011	No. (%) of Total HIV/AIDS Diagnosis, 2010-2011
Male	2,303,967 (49%)	10,424 (70%)	1,175 (75%)
Female	2,375,263 (51%)	4,521 (30%)	384 (25%)
Total	4,679,230	14,945	1,559

Source: US Census Data; SCDHEC eHARS.

Epidemiologic Profile

Figure 2.2: S.C. HIV/AIDS case rate per 100,000 for males and females, 2001-2011

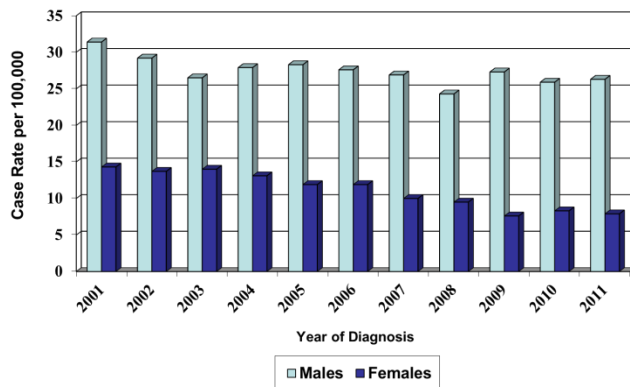


Figure 2.2 shows the rate per 100,000 population for males and females diagnosed with HIV/AIDS each year. During 2001-2011 the case rate for females appears to be slightly decreasing. For males, the rate tends to oscillate, but has a generally downward trend.

Race/Ethnicity

African-Americans are disproportionately impacted by HIV/AIDS in South Carolina. They comprise 28 percent of the state's total population, yet 72 percent of the total people living with HIV are African-American. Three percent of total cases are Hispanic, who comprise five percent of the state's population (Figure 2.3).

Figure 2.3: Proportion of persons living with HIV/AIDS by race/ethnicity, 2011

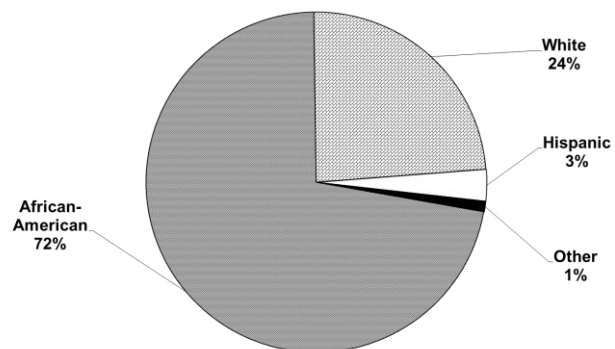


Figure 2.4: Disproportionate HIV impact by race/ethnicity/gender, S.C.

Gender & Race/Ethnicity	No. (%) SC Total Pop.	No. (%) of Total Persons Living With HIV/AIDS, 2011	No. (%) HIV/AIDS Diagnosis, 2010-2011
Black Males	613,014 (13%)	7,061 (47%)	861 (55%)
Black Females	694,002 (15%)	3,677 (25%)	316 (20%)
White Males	1,465,773 (32%)	2,867 (19%)	228 (15%)
White Females	1,532,371 (33%)	688 (5%)	51 (3%)
Hispanic Males	131,320 (3%)	388 (3%)	65 (4%)
Hisp. Females	104,362 (2%)	112 (1%)	15 (1%)

African-American men comprise 13 percent of the state's population, yet 47 percent of the total prevalent HIV/AIDS cases in 2011. African-American women, similarly, comprise 15 percent of the population, yet 25 percent of prevalent cases. More recent infections diagnosed during 2010-2011 reflect a slight increase among African-American men and a slight decrease among African-American women relative to the proportion of people living with HIV in 2011 (Figure 2.4).

Epidemiologic Profile

Each year the number of all people living with HIV/AIDS continues to grow. Case rates per 100,000 by race and gender show the disparate burden of HIV among African-Americans. As Figure 2.5 shows, the rate per 100,000 population in 2011 is six times higher for black males than for white males, and twelve times higher for black females compared to white females.

Figure 2.5: S.C. HIV/AIDS prevalence rates by race/gender, 2001-2011

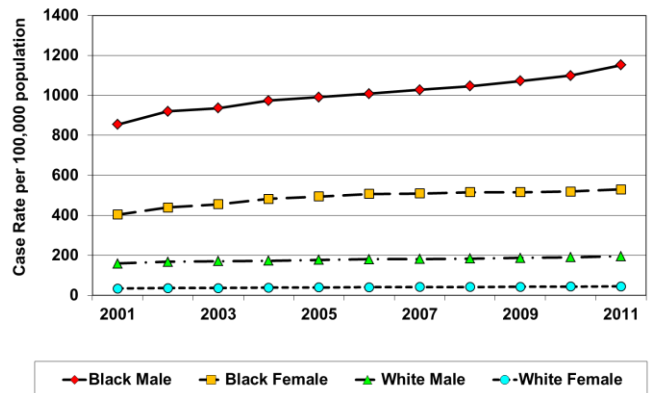
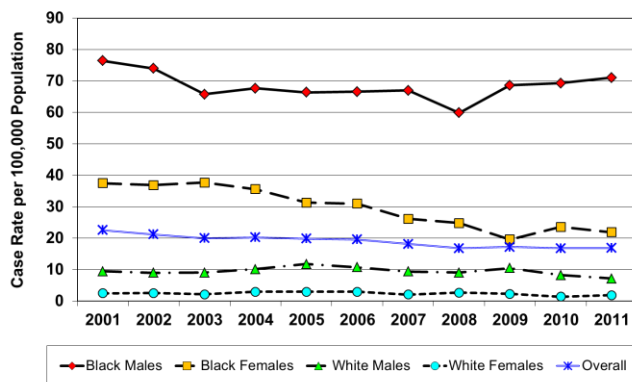


Figure 2.6: S.C. HIV/AIDS case rates by race/gender and year of diagnosis, 2001-2011



While the overall number and rate of newly diagnosed people with HIV/AIDS each year has been declining, there are differences among race/gender populations. The case rate per 100,000 population among white men in South Carolina has on average remained relatively stable during the past five years (2007-2011) (Figure 2.6). The rate for African-American women in S.C. has steadily decreased during the past decade, and now appears to be leveling off in the 20-25 rate per 100,000 range. The rate for African-American males had been relatively stable, but recently is on the rise (increasing 18.7 percent between 2007 and 2011).

Age

People between the ages of 20 and 44 are disproportionately impacted. They make up 33 percent of the total population yet they represent about 45 percent of prevalent and 66 percent of newly diagnosed cases (Figure 2.7).

Figure 2.7: Disproportionate S.C. HIV impact by age

Age Range	No. (%) SC Population	No. (%) of Total Persons Living with HIV/AIDS, 2011	No. (%) of Total HIV/AIDS Diagnosis, 2010-2011
<15 Years	895,436 (19%)	52 (<1%)	9 (<1%)
15-19 Years	328,989 (7%)	107 (<1%)	108 (7%)
20-24 Years	332,494 (7%)	676 (5%)	347 (22%)
25-44 Years	1,193,348 (26%)	6,016 (40%)	686 (44%)
45+ Years	1,875,097 (41%)	8,095 (54%)	409 (26%)

Epidemiologic Profile

Figure 2.8: S.C. HIV/AIDS case rate per 100,000 by age by year of diagnosis, 2001-2011

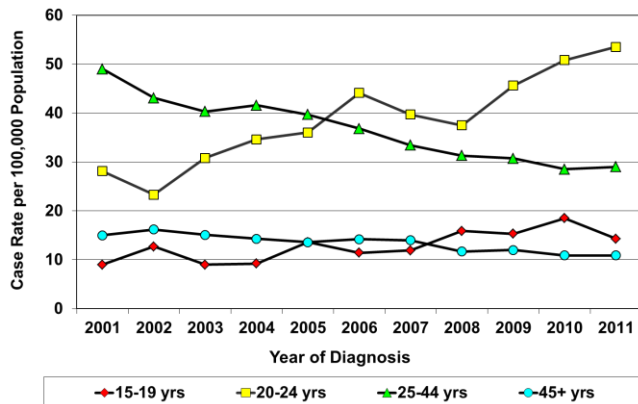
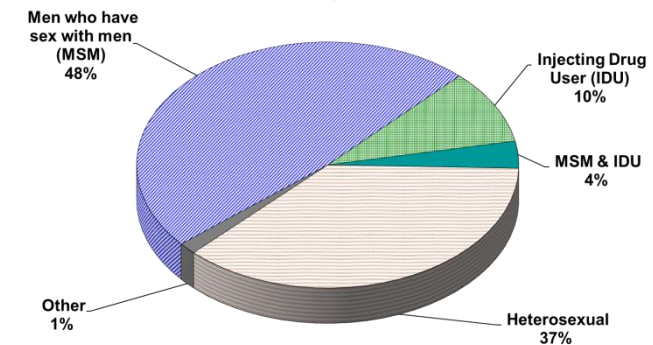


Figure 2.8 shows the HIV/AIDS case rates by year of diagnosis for selected age groups. Since 2006, the rate for people 20-24 years of age has been consistently higher than any other age group and is continuing to grow; the rate for people age 20-24 in 2011 increased five percent compared to 2010's rate, and 35 percent compared to 2007's rate. Conversely, since 2001, the rate for those 25-44 years of age has been steadily decreasing; however, the 2011 rate did increase two percent over 2010's rate. The rate for people 15-24 years of age, after a sharp increase in 2011, has dropped to below 2008's rate.

Risk Exposure

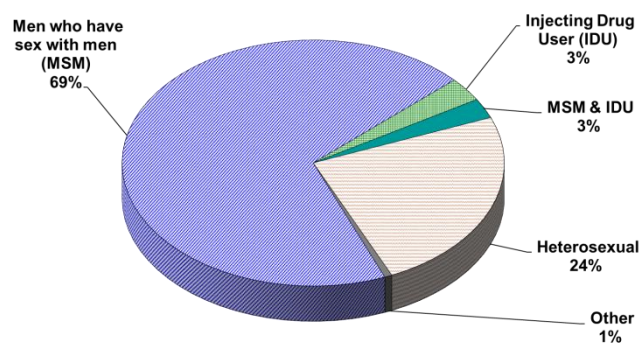
Men who have sex with men (MSM) comprise the greatest proportion of people living with HIV/AIDS (PLWHA) at the end of 2011 with known risk factors (48 percent). Heterosexuals account for 37 percent of PLWHA. Ten percent are injecting drug users (IDU). Four percent are the combined risks of MSM and IDU (Figure 2.9). Other risks include blood transfusions, hemophilia, and perinatal transmission; all of which account for a very small proportion of PLWHA. Of the total estimated number of PLWHA in 2011, 23 percent had no risk identified (not reflected in Figure 2.9).

Figure 2.9: Proportion of persons living with HIV/AIDS by risk exposure, 2011
N=11,478



Note: Total excludes cases with no risk identified.

Figure 2.10: Proportion of HIV/AIDS cases by risk exposure, 2010-2011
N=1,112



Note: Total excludes cases with no risk identified.

Figure 2.10 shows a slight shift in risk exposure categories among people diagnosed with HIV/AIDS during 2010-2011 with known risk exposures compared to the prevalence cases in Figure 2.9. The proportion of cases due to heterosexual transmission is 24 percent, men who have sex with men accounted for 69 percent, IDUs made up three percent, and MSM and IDU is three percent. Twenty-nine percent of these cases had no risk identified (not shown in Figure 2.10).

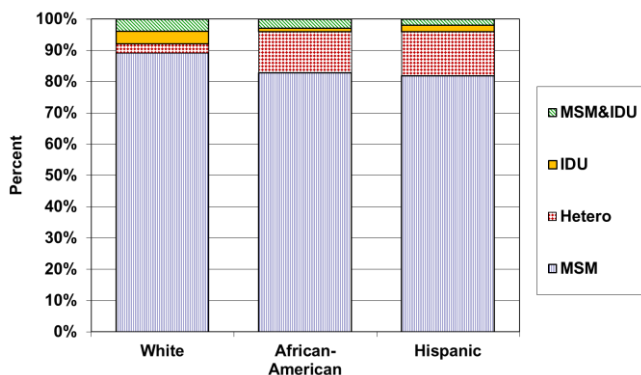
Epidemiologic Profile

Note: The primary reasons for risk exposure information not reported were explained in the South Carolina HIV/AIDS Surveillance System section of the introduction. Over time, the proportion of cases with no risk identified in a given year decreases when risks are determined through follow-up surveillance activities. For example, during 2000 there were 312 cases originally reported with no risk; as of December 2011, risks were determined for 66 of the cases. The race/gender profile of 2010-2011 cases originally reported with no risks is relatively close to the total proportion of HIV/AIDS cases by race/gender (Figure 2.11).

Figure 2.11: Comparison of no risk identified cases with total S.C. HIV/AIDS reported cases, 2010-2011

Race/Gender (Adult/Adolescent Cases)	Total HIV/AIDS Cases 2010-2011	
	% with No Risk Identified N=446	% Cases Reported N=1,558
Black Male	43%	55%
Black Female	35%	20%
White Male	8%	15%
White Female	5%	3%
Hispanic Male	5%	4%
Hispanic Female	2%	1%

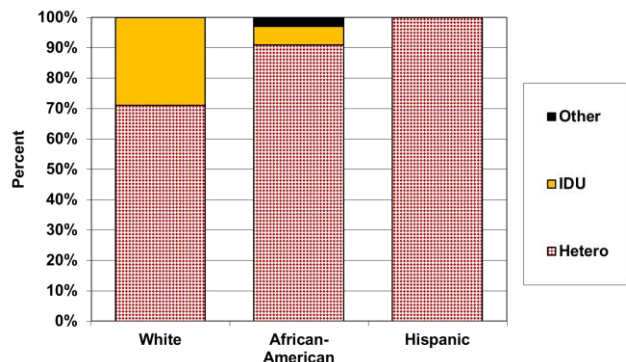
Figure 2.12: Proportion of Male HIV/AIDS cases by exposure category, diagnosed 2010-2011



Excludes persons with no risk reported. The exposure category "Other" = <1% for each race/ethnicity.

During 2010-2011, 73 percent of males diagnosed with HIV/AIDS were African-American. Among white, African-American, and Hispanic men with reported risk factors, most cases were attributed to male to male sexual contact (90 percent, 82 percent, and 81 percent respectively). Heterosexual risk is more commonly reported among Hispanic (14 percent) and African-American males (13 percent) than among white males (three percent). Injecting drug use and the combined risk MSM & IDU are reported equally (between 1 and 4 percent) for white, African-American, and Hispanic men (Figure 2.12).

Figure 2.13: Proportion of Female HIV/AIDS cases by exposure category, diagnosed 2010-2011



Excludes persons with no risk reported.

Among women diagnosed during 2010-2011, 82 percent of cases were among African-American women. Heterosexual contact is the most common reported risk for all women (89 percent).

Epidemiologic Profile

Figures 2.14 and 2.15 show the proportion of total HIV/AIDS cases diagnosed during four periods from 2000 to 2011 by sex and risk exposure category for males and females in South Carolina. Both men and women experienced decreases over time in the proportion of total cases with risk reported among injecting drug users. During 2006-2008 to 2009-2011, there was a 43 percent decrease in the proportion of injecting drug use among men and an 18 percent decrease among women. The proportion of heterosexual risk decreased 45 percent for men and increased two percent for women during the same time period.

Figure 2.14: Proportional distribution of male HIV/AIDS cases by exposure category, diagnosed 2000-2011

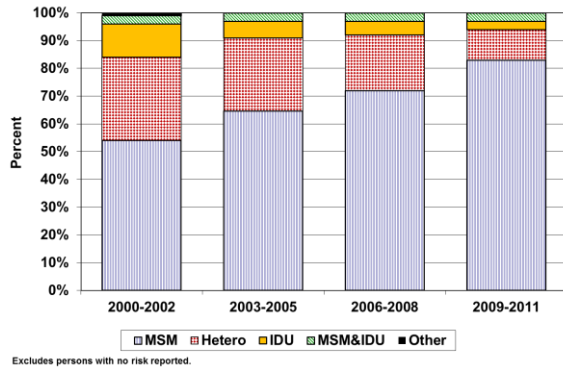
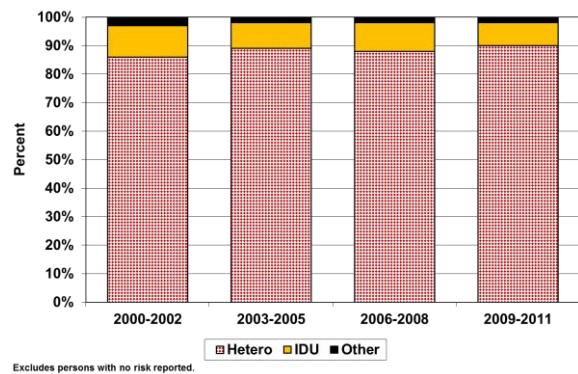


Figure 2.15: Proportional distribution of female HIV/AIDS cases, by exposure category, diagnosed 2000-2011



Residence

People living with HIV/AIDS are widespread throughout the state. Figure 2.16 shows the prevalence rate for African-Americans: Seventeen percent of South Carolina counties have a prevalence rate greater than 846.7 per 100,000 population (the state prevalence rate for African-Americans is 821.6). Twenty-six percent of South Carolina counties have a three year average (2009-2011) incidence rate for African-American (Figure 2.17) greater than 43.4 per 100,000 population (the state three year average incidence rate for African-Americans is 44.2).

Figure 2.16: S.C. HIV/AIDS prevalence rates 2011; African-American cases currently living

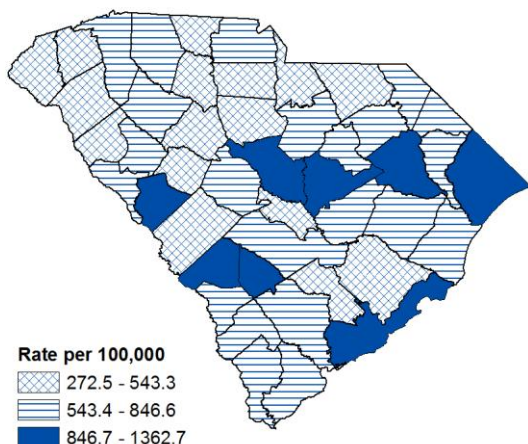
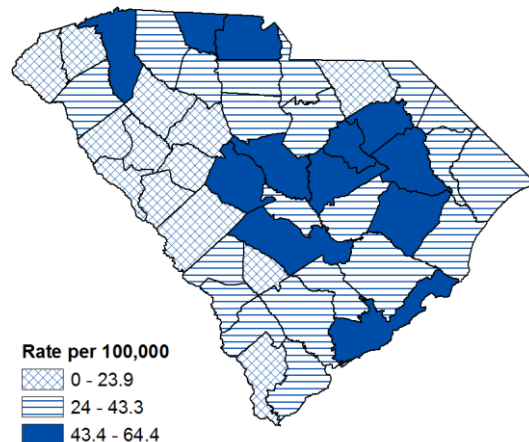


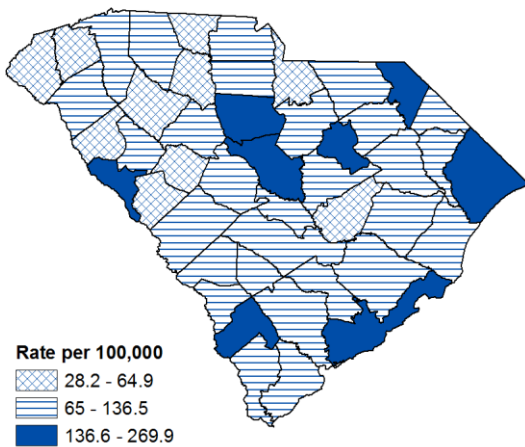
Figure 2.17: S.C. HIV/AIDS incidence rate Three year average (2009-2011) of cases African-American



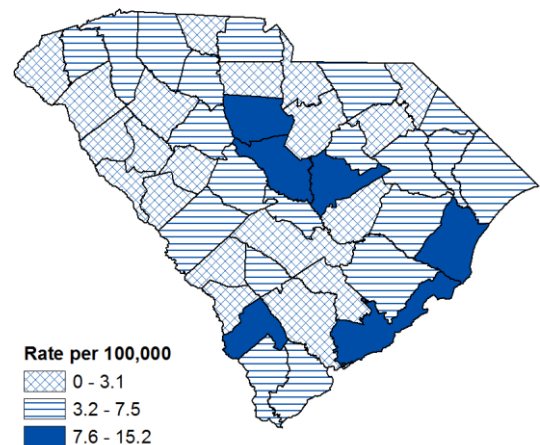
Epidemiologic Profile

While the HIV/AIDS rate for whites in South Carolina is significantly lower than for African-Americans, the distribution throughout the state is not dissimilar. Figure 2.18 shows seventeen percent of South Carolina counties have a prevalence rate for whites that is greater than 136.6 per 100,000 population (the state prevalence rate for whites is 118.6). Thirteen percent of South Carolina counties have a three year average (2009-2011) incidence rate for whites (Figure 2.19) greater than 7.6 per 100,000 population (the state three year average incidence rate for whites is 5.2).

**Figure 2.18: S.C. HIV/AIDS prevalence rates 2011;
White cases currently living**



**Figure 2.19: S.C. HIV/AIDS incidence rate
Three year average (2009-2011) of cases
White**



Mortality

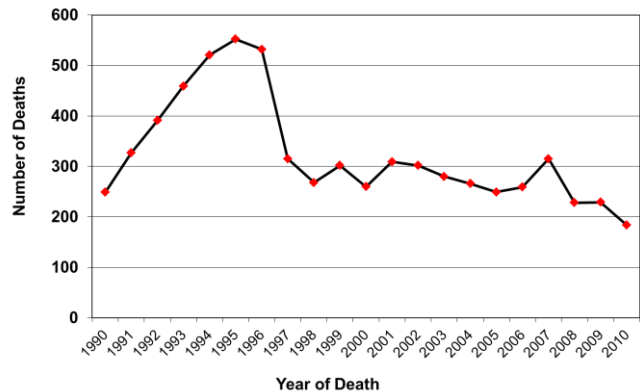
With the advent of combination therapies and the use of prophylaxis, people infected with HIV are living longer and delaying the progression of AIDS, which is the advanced stage of the disease. These medications have also led to the decrease in AIDS-related deaths.

Large declines in AIDS mortality nationally essentially occurred during 1996-1997. Officials at the Centers for Disease Control and Prevention (CDC) cautiously attributed the sudden drops in deaths to new antiretrovirals, protease inhibitors, combination therapies, and increased prophylaxis for opportunistic illnesses. However, the initially reported gains were tempered by reports of demographic differentials that suggested only certain groups were benefiting from these new therapies.

Epidemiologic Profile

Figure 2.20 shows the largest decline in deaths in South Carolina was in 1997, with AIDS related deaths dropping to 317 from 532 the previous year. Since 1997, the number of AIDS deaths per year has continued to decline (184 in 2010); however, as seen in the graph, there are fluctuations in the number of AIDS deaths from year to year. Reasons for this may include delay in diagnosis of HIV infection until severe symptoms arise, difficulty in adherence to prescribed medical treatments, and development of viral resistance to therapy.

Figure 2.20: Deaths among persons with AIDS in South Carolina, 1990-2010



Source – Vital Records, S.C. Residence Data.

Figure 2.21: Characteristics of persons who died of AIDS, 2010

	Number	Percent
Race/Sex		
Black Male	100	54
Black Female	47	26
White Male	27	15
White Female	5	3
Age Group		
<15	0	0
15-24	1	<1
25-44	66	36
45+	117	64

Source – Vital Records, S.C. Residence Data.

In addition to representing 47 percent of people living with HIV/AIDS, African-American males accounted for the majority of people dying from AIDS (54 percent) in 2010. African-American females accounted for 26 percent of AIDS related deaths followed by white males (15 percent). By age group, the majority of deaths occurred among people age 45 and older (64 percent) (Figure 2.21).

Region 3 and Region 4 are the areas with the highest number of deaths from AIDS in South Carolina in 2010 (Figure 2.22). These areas are also among those that have the highest prevalence of HIV/AIDS in the state.

Figure 2.22: Number of persons who died of AIDS by health region, 2010

Health Region	No.	%
Region 1	8	4
Region 2	24	13
Region 3	42	23
Region 4	32	17
Region 5	19	10
Region 6	13	7
Region 7	27	15
Region 8	19	10
TOTAL	184	100

Source – Vital Records, S.C. Residence Data.

Who is at risk for becoming infected with HIV?

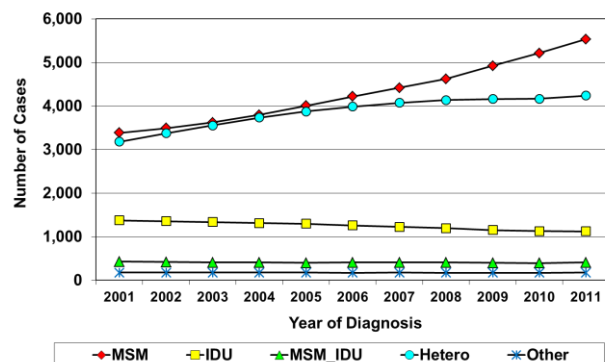
The people most likely to become infected with HIV are those who engage in high-risk behaviors with people in communities with a high number/rate of people living with HIV infection, i.e. prevalence. The frequency of high-risk behavior combined with the HIV prevalence in sexual or drug using-networks determines a person's risk for becoming infected. In order to accurately target STD/HIV prevention and treatment activities, it is important for community planning groups (and program providers) to have information on the number and characteristics of people who become newly infected with HIV and people whose behaviors or other exposures put them at various levels of risk for STD and HIV infection. This section summarizes HIV infection among population groups at high risk for HIV infection, sexually transmitted disease data, and behavioral data.

Characteristics of HIV/AIDS in People at Highest Risk

Analysis of characteristics of people with HIV/AIDS helps identify people at greatest risk for becoming infected. Risk for infection can be determined by assessing the frequency of high-risk behavior (e.g., unprotected sex, needle-sharing) in combination with the estimated prevalence of HIV/AIDS and incidence of HIV/AIDS.

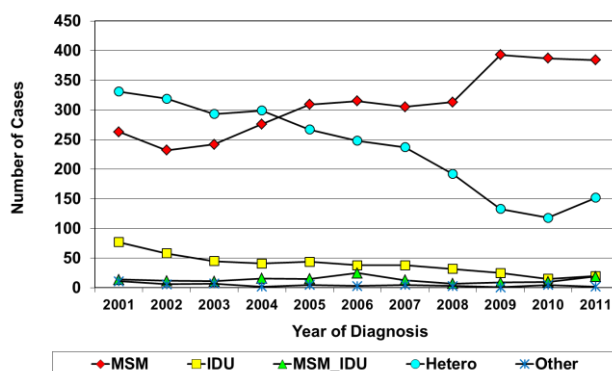
Figure 3.1 shows the number of people in South Carolina living with HIV/AIDS at the end of each year by reported risk. Men who have sex with men (MSM) comprise the greatest number of people living with HIV, followed closely by heterosexuals. Injecting drug users (IDU), MSM and IDU, and other risks comprise fewer numbers.

Figure 3.1: Number of persons presumed living with HIV/AIDS at end of year by risk, 2001-2011



Excludes persons with no risk reported.

Figure 3.2: Number of HIV/AIDS cases by year of diagnosis and risk, 2001-2011



Excludes persons with no risk reported.

As with people living with HIV, newly diagnosed HIV/AIDS cases each year indicate that beginning around 2005, more people are reporting their risk as men who have sex with men. As Figure 3.2 shows, this is a change from the earlier part of the decade when heterosexual risk was the most often reported risk.

Epidemiologic Profile

While not validated, many local experts believe the number of heterosexuals among African-American men may be artificially high due to fears of discrimination; therefore, men do not reveal male to male sex as a risk behavior. The number of injecting drug users reported each year declined over the past decade, while the combined risks of MSM and IDU have remained relatively stable.

Based on data in this profile, the following primary populations have been identified as being at the highest risk of HIV/AIDS: men who have sex with men (MSM), high-risk heterosexuals, injecting drug users (IDUs), and men who have sex with men and injecting drug use. Women will be described in the heterosexual and injecting drug user section, and teenagers/young adults will be described within each population category.

Men who have Sex with Men

Estimates of Men Who Have Sex with Men Behavior in South Carolina

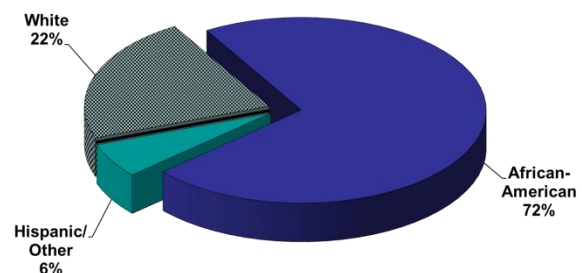
According to the U.S. Census Bureau, there are an estimated 1,534,053 males in South Carolina between the ages of 15-64, which is the age range when people are most sexually active. Review of literature and other state profiles, indicates that the estimated percentage of men who have sex with men (MSM) ranges from 2.1 percent to 10.1 percent, with the average at 2.7 percent. This would mean the number of MSM in South Carolina could be estimated to 41,419; although the estimated range is much broader.

Characteristics of men who have sex with men

The largest proportion of people living with HIV/AIDS in South Carolina at the end of 2011 was men who have sex with men (48 percent of total prevalent adult/adolescent cases with identifiable risk). MSM accounted for a higher proportion (69 percent) of the more recently diagnosed adult/adolescent cases during 2010-2011.

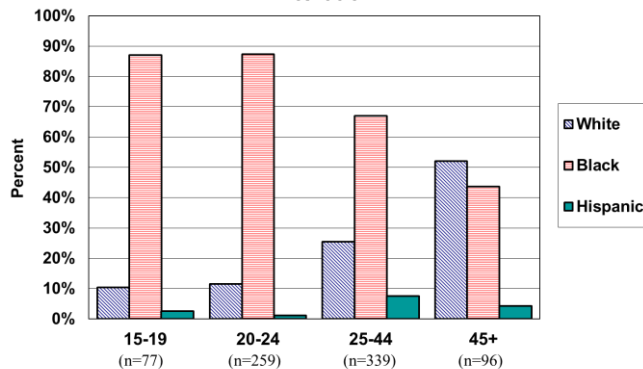
As Figure 3.3 demonstrates, the majority of MSM cases diagnosed during 2010-2011 were African-Americans (72 percent). White men accounted for 22 percent of the new cases and six percent were Hispanic or other races.

Figure 3.3: Proportion of men with HIV/AIDS who have sex with men by race/ethnicity, diagnosed 2010-2011
N=771



Epidemiologic Profile

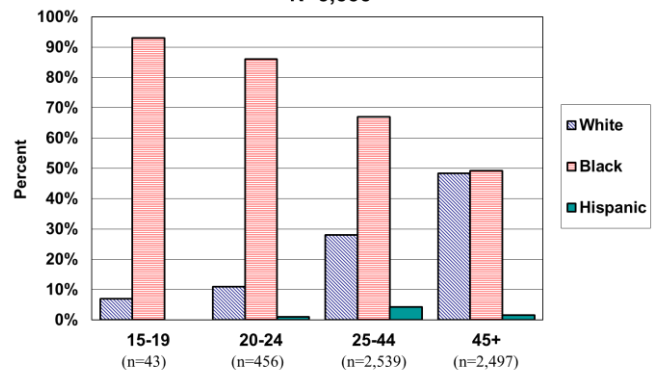
Figure 3.4: Percent of MSM HIV/AIDS cases diagnosed 2010-2011 by age group & race/ethnicity
N=771



Total N includes 14 "Other" race/ethnicity not included in graph.

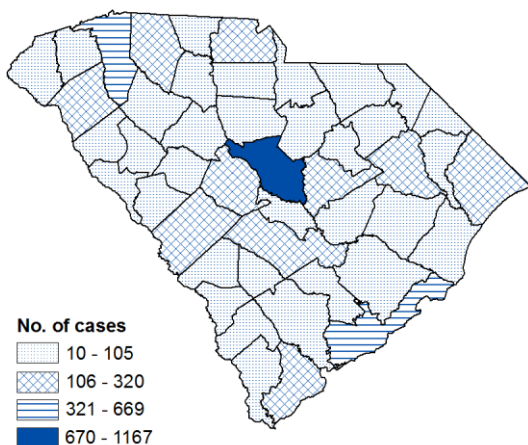
Of the men who have sex with men presumed living with HIV/AIDS in 2011, 61 percent were African-American, 36 percent were white and four percent were Hispanic/Other men. As Figure 3.5 shows, for each younger age category less than 45 years, African-Americans comprise the greatest proportion of living MSM. However, among those 45 years and older, the proportion is almost equal for both white and African-American men.

Figure 3.5: Percent of MSM living with HIV/AIDS by age/race, 2011
N=5,535



Total N includes 55 "Other" race/ethnicity not included in graph.

Figure 3.6: S.C. HIV/AIDS prevalence by MSM exposure category, 2011 reported cases by county



Richland County has the greatest number of men who have sex with men living with HIV/AIDS in 2011, with Greenville and Charleston having the next highest numbers. Most South Carolina counties had fewer than 100 men who have sex with men living with HIV/AIDS (Figure 3.6).

Summary

Among men who have sex with men, African-American men account for over half the proportion of both living cases (61 percent) and newly diagnosed HIV/AIDS cases (72 percent). And of men who have sex with men under the age of forty-five, African-American men comprised 70 percent of living cases and 76 percent of newly diagnosed HIV/AIDS cases.

High Risk Heterosexuals

Estimates of High-Risk Heterosexual Behavior in South Carolina

It is difficult to make an assessment of the number of people in South Carolina who engage in heterosexual contact that puts them at high risk for becoming infected with HIV. While there are some differences in the population of people with HIV/AIDS and the population of those with a non-HIV STD, most experts acknowledge that a diagnosis of an STD would suggest the individual is engaging in unsafe sexual practices. During 2011, 28,584 cases of chlamydia, 8,263 cases of gonorrhea and 228 cases of infectious syphilis were reported in South Carolina. More data on STDs, as well as other behavioral indicators such as teenage pregnancy and condom use, is described later.

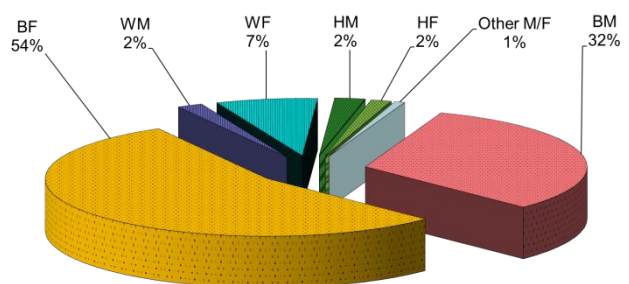
In order for a case of HIV or AIDS to be considered as heterosexual transmission, it must be reported that the individual had heterosexual contact with a person who has documented HIV infection or AIDS, or had heterosexual contact with a person who is in a high risk group for HIV (MSM or injecting drug user).

Characteristics of high risk heterosexuals

People with documented high-risk heterosexual contact comprise 37 percent of the total adult/adolescent people living with HIV/AIDS at the end of 2011 and 24 percent of people more recently diagnosed during 2010-2011 (excluding people with no risk identified for both new and prevalent cases). The number of heterosexual cases diagnosed each year decreased 36 percent from 2007 to 2011.

Figure 3.7 shows that African-American men and women comprise a disproportionate 86 percent of recently diagnosed heterosexual HIV/AIDS cases. African-American women account for 54 percent of recent cases and white women account for seven percent. Thirty-two percent are African-American men while white men account for two percent of recent cases.

Figure 3.7: Proportion of heterosexual HIV/AIDS cases by race/ethnicity, diagnosed 2010-2011
N=270



Epidemiologic Profile

Figure 3.8: S.C. HIV/AIDS cases attributed to heterosexual transmission, by sex and year of diagnosis

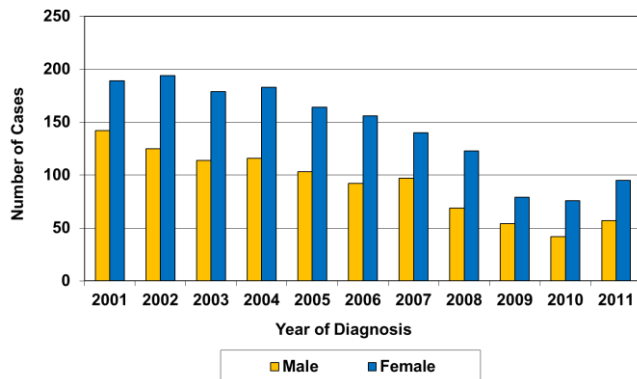


Figure 3.8 shows the number of heterosexually acquired HIV cases in men and women in South Carolina from 2001 to 2011. During most of this period, the proportion of female cases averaged 59 percent higher than males. The number of men and women reporting heterosexual risk has steadily decreased over the past several years; however, 2011 saw a slight increase over 2010's numbers: a 36 percent increase for males and a 25 percent increase for females.

The majority of high risk heterosexuals recently diagnosed were 25-44 years of age (47 percent); 40 percent were 45 years and older and 13 percent under 25 years. African-American women and men comprised the greatest proportion of cases in each age group (Figure 3.9). Among young women less than 45 years of age, over eight out of every ten are African-American women.

Figure 3.9: Percent heterosexual S.C. HIV/AIDS cases diagnosed 2010-2011 by age/race/sex
N=270

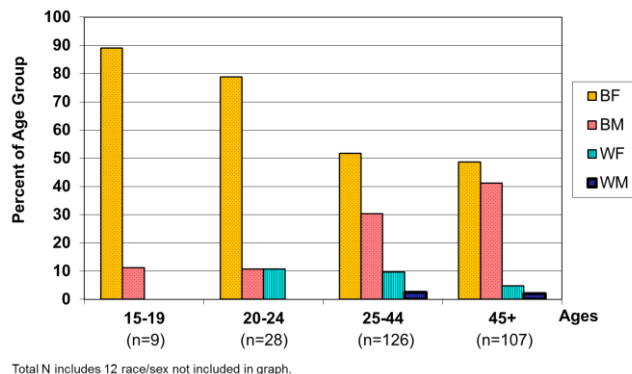
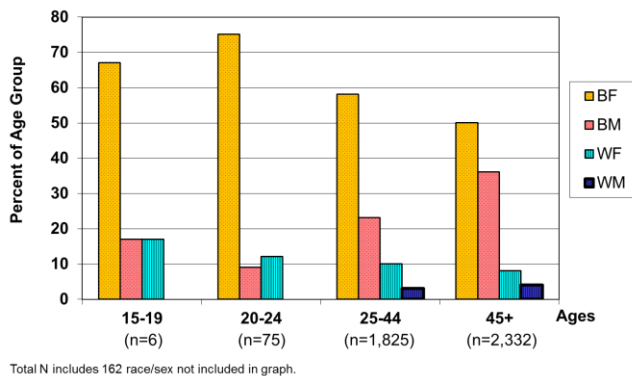


Figure 3.10: Percent of heterosexuals living with HIV/AIDS by age group and race/sex, 2011
N=4,238



Of high risk heterosexual people presumed living with HIV/AIDS in 2011, over half were African-American women (54 percent), 30 percent were African-American men, nine percent were white women, and three percent were white men. As Figure 3.10 shows, over eight of every 10 young women under age 25 living with HIV/AIDS were African-American; over one half of people 25-44 were African-American women. Similarly, the proportion of people living with HIV/AIDS 45 years and older is greatest for African-American women followed

closely by African-American men. As with more recently diagnosed people, white women and men account for 12 percent of people living with HIV across all age groups.

Epidemiologic Profile

Figure 3.11: S.C. HIV/AIDS prevalence by Heterosexual exposure category, 2011 reported cases by county

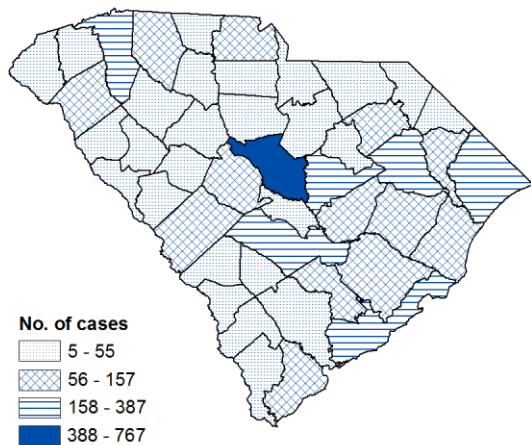
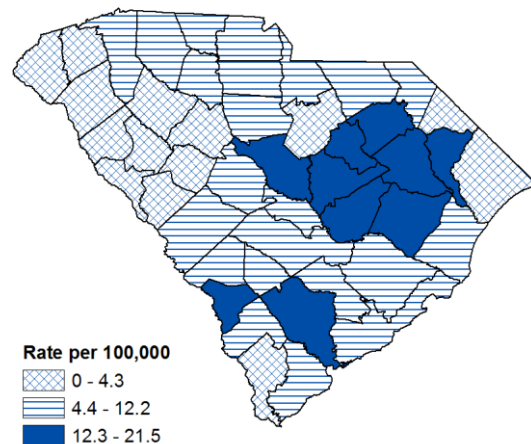


Figure 3.11 shows the counties with the highest prevalence of people living with HIV/AIDS due to heterosexual transmission. Richland has the highest number of reported cases (767), followed closely by Charleston, Florence, Greenville, Horry, Sumter, and Orangeburg. Eighty-six percent of South Carolina counties have less than 157 reported cases each.

Figure 3.12 shows the case rate for 2009-2011 among women, an indicator for more recent heterosexual risk. Williamsburg and Lee counties have the highest case rates in the state (20.8 and 21.5 per 100,000 population respectively). Fifty-nine percent of counties have case rates below 7.9 (the state rate).

Figure 3.12: S.C. HIV/AIDS incidence rates Three year average (2009-2011) of cases Females



Summary

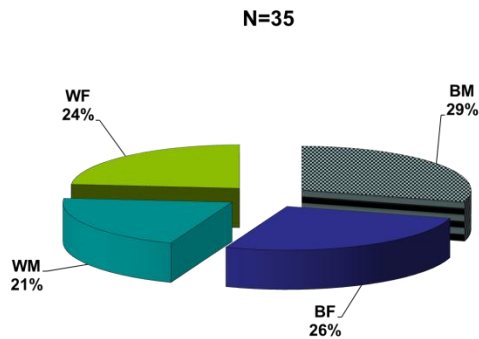
Among heterosexually exposed cases, African-American women account for half of newly diagnosed HIV/AIDS cases (50 percent) and African-American men account for 31 percent. Among heterosexuals living with HIV/AIDS, African-American women account for 54 percent and African-American men account for 30 percent. African-American men and women 25-44 years of age account for over eight out of every ten person living and recently diagnosed cases.

Injecting Drug Users

Characteristics of Injecting Drug Users

Injecting drug users (IDUs) account for 10 percent of the people presumed living with HIV/AIDS in 2011 and three percent of people recently diagnosed with HIV/AIDS during 2010-2011. The number of IDU cases diagnosed each year decreased 47 percent from 2007 to 2011.

Figure 3.13: Proportion of injecting drug users diagnosed with HIV/AIDS 2010-2011 by race/sex

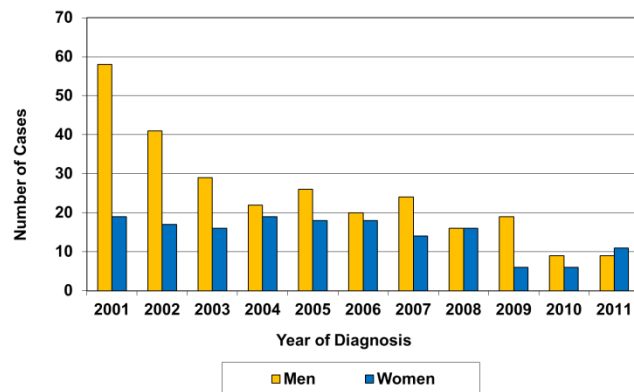


Total N includes 1 "Other" race/sex not included in graph.

Figure 3.13 shows the proportion of recently diagnosed injecting drug use cases is relatively evenly distributed, with African-American men comprising the largest proportion (29 percent).

Within HIV/AIDS cases due to injecting drug use, while the actual number of cases fluctuates year to year, the trend among both men and women has been a steady decrease in the number of cases. Historically, men have been overwhelmingly impacted by HIV transmitted by injecting drug use, averaging three cases to every one case reported among women; in 2011, however, the number of cases among women outnumbered the number of cases among men (Figure 3.14).

Figure 3.14: Number of HIV/AIDS cases due to injecting drug use by sex and year of diagnosis, 2001-2011



Epidemiologic Profile

Figure 3.15 shows that 63 percent of IDU cases diagnosed in 2010-2011 are age 40 and over, while 37 percent are under the age of forty.

Figure 3.15: Percent of injecting drug users diagnosed with HIV/AIDS 2010-2011 by age group
N=35

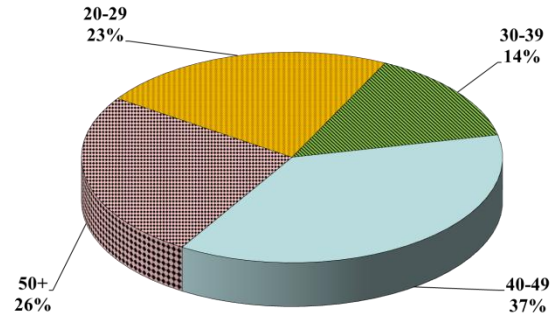
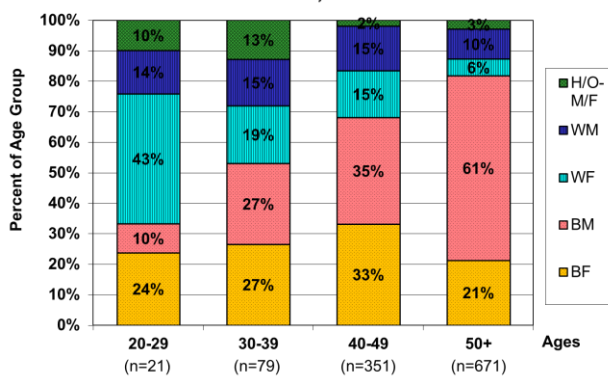


Figure 3.16: Percent of IDU persons presumed living with HIV/AIDS by race/sex and age group, 2011
N=1,122

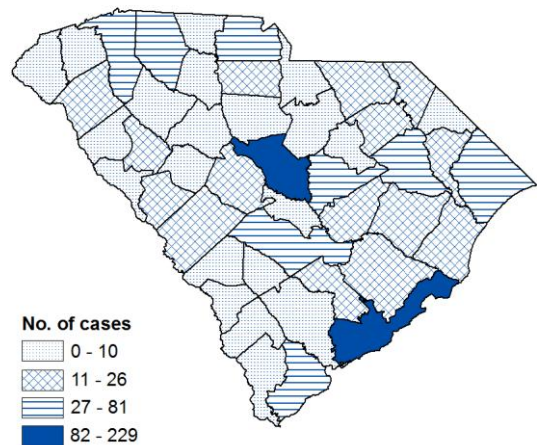


Of people living with HIV/AIDS due to injecting drug use, most (91 percent) are 40 years of age and older. Within the 20-29 age group, white females account for the greatest proportion (43 percent).

African-Americans account for the greatest proportion of cases over the age of 30, with African-American men accounting for 61 percent of those 50 and older (Figure 3.16).

Figure 3.17 indicates the counties with the highest number of people living with HIV with injecting drug use risk (Richland and Charleston). As with other risks, the more urban counties have the greatest numbers.

Figure 3.17: S.C. HIV/AIDS prevalence by IDU exposure category, 2011 reported cases by county



Other Populations at Risk

Other populations at varying risk for HIV are described below and include people with sexually transmitted diseases, infants and children, and pregnant teen age women.

People with Sexually Transmitted Diseases (STDs)

STDs are primary risk factors for HIV infection and a marker of high risk, unprotected sexual behavior. Many STDs cause lesions or other skin conditions that facilitate HIV infection. Trends in STD infection among different populations (e.g. adolescents, women, men who have sex with men) may reflect changing patterns in HIV infection that have not yet become evident in the HIV/AIDS caseload of a particular area.

Chlamydia

Figure 3.20 shows the increase in chlamydia over the last decade; some of this increase may be attributed to initiating routine screening for all young women attending family planning and STD clinics in health departments statewide. In 2011, there were 28,584 cases of chlamydia diagnosed in South Carolina. Among those cases, 34 percent were African-American women and 12 percent were white women. Thirty-eight percent of chlamydia cases have 'Unknown' or 'Other' for race and/or sex; this is attributed to the fact that these conditions are primarily reported by labs, and frequently do not indicate a race.

Figure 3.20: South Carolina reported Chlamydia cases by year of diagnosis, 2001-2011

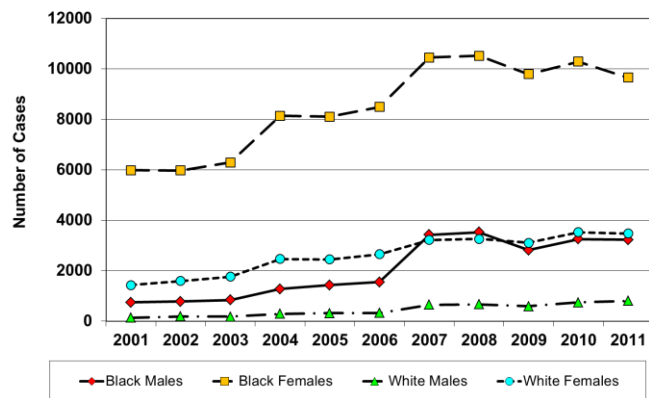


Figure 3.21: Proportion of 2011 reported Chlamydia cases by year of diagnosis by age group

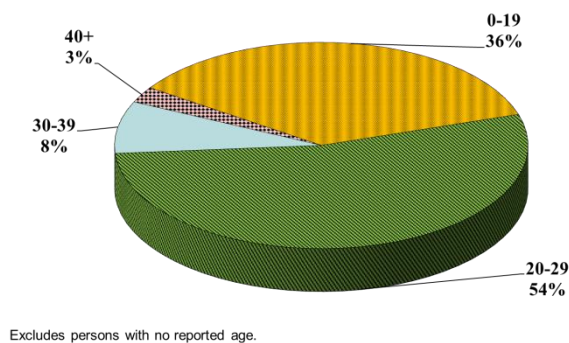


Figure 3.21 shows that in 2011 young adults 20-29 make up the highest proportion of chlamydia (54 percent) in the state. Those age 19 and under make up the second highest proportion of chlamydia (36 percent).

Epidemiologic Profile

Gonorrhea

In 2011, 8,262 gonorrhea cases were diagnosed. African-American men and women account for 54 percent of reported cases in 2011. As with chlamydia, thirty-five percent of reported cases have 'Unknown' or 'Other' for race and/or sex. Figure 3.22 shows trends among reported race/gender by year.

Figure 3.22: South Carolina reported gonorrhea cases by year of diagnosis, 2001-2011

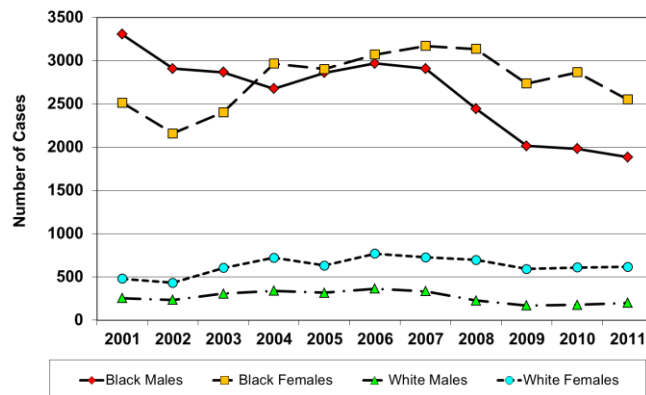
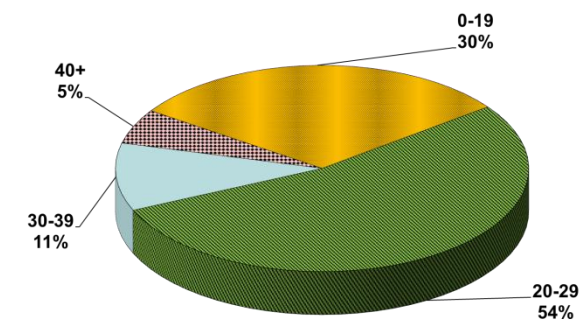


Figure 3.23: Proportion of 2011 reported Gonorrhea cases by year of diagnosis by age group



Excludes persons with no reported age.

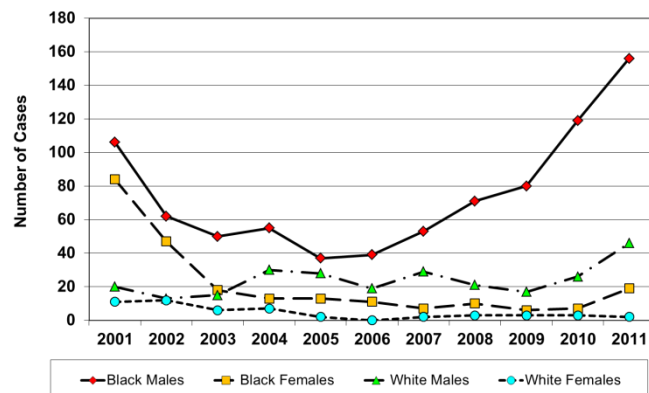
Gonorrhea cases most affect young adults under the age of 30 (84 percent of total), with those age 19 and under comprising 30 percent of total, and those age 20-29 comprising 54 percent (Figure 3.23).

Infectious Syphilis

In 2011, 228 cases of infectious syphilis were diagnosed; this is up from the 160 cases reported in 2010 and is a 143 percent increase from the number of cases reported in 2007.

As Figure 3.24 shows, men represent the majority of cases (88 percent). African-American men specifically, are most impacted, accounting for 68 percent of total cases, while white men account for 20 percent of total cases. The number of infectious syphilis cases among white men has increased 59 percent between 2007 and 2011; over the same time period, the number of infectious syphilis cases for African-American men has increased 194 percent. The number of infectious syphilis

Figure 3.24: South Carolina reported Infectious Syphilis cases by year of diagnosis, 2001-2011



Epidemiologic Profile

cases among African-American females dropped significantly in the early part of the decade, and averaged eleven cases per year between 2003 and 2010; however, 2011 saw a 171 percent increase over 2010 numbers. White females averaged three cases per year over the same time period and saw no change from 2010 to 2011.

Figure 3.25: Proportion of 2011 reported Infectious Syphilis cases by year of diagnosis by age group

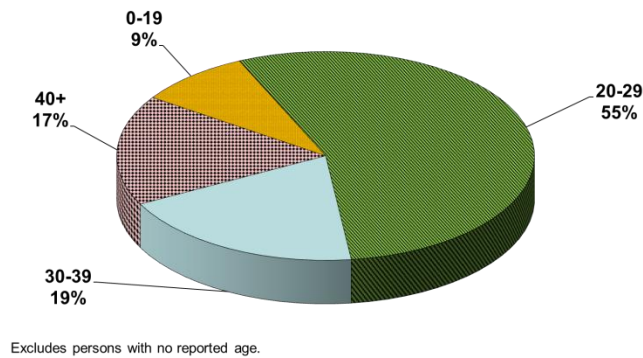
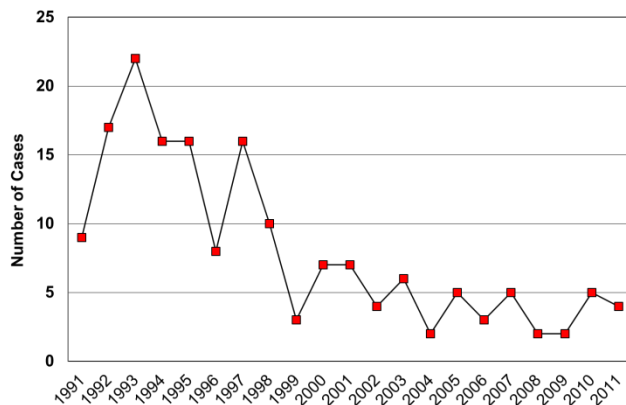


Figure 3.25 shows the proportion of 2011 reported infectious syphilis cases by age group. In previous years, the proportion of those impacted by infectious syphilis has been evenly divided among those under the age of 30 and those ages 30 and over (51 percent and 49 percent respectively in 2009). However, 2010 and 2011 have shown a shift in the age range for those most impacted by infectious syphilis. The 20 to 29 age group has the most growth, accounting for 41 percent of cases in 2009, 52 percent in 2010, and 55 percent in 2011. Conversely, the 40 and over age group has had the greatest decrease, going from 30 percent of cases in 2009, to 18 percent in 2010, and down to 17 percent in 2011.

Infants and Children: (Children under 13 years of age)

Cumulatively, through December 2011, there have been 221 HIV infection cases diagnosed among children less than 13 years of age; this represents one percent of the total reported AIDS and HIV infection cases.

Figure 3.18: Number of children <13 years old diagnosed with HIV/AIDS in South Carolina, 1991-2011

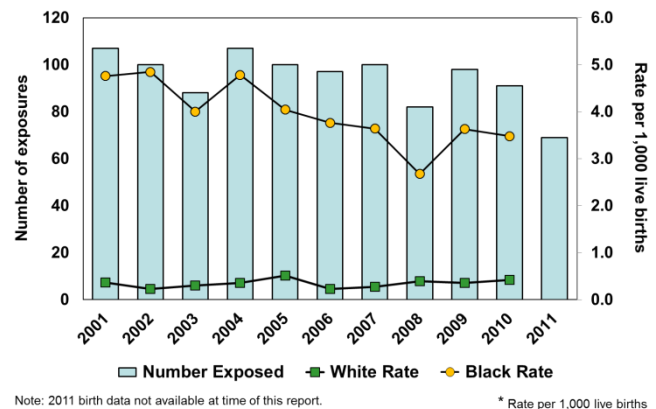


Most infants and children infected with HIV acquired it perinatally from their mother. There has been significant progress during the past twenty years in reducing the number of infants with perinatal acquired HIV infection. Figure 3.18 shows the decline in the number of infants diagnosed; from a high of 22 cases in 1993 to 2 cases in 2008/2009.

Perinatally HIV exposed births

The number of perinatally HIV exposed births averages around 88 per year over the last five years; however, perinatally acquired HIV cases have averaged two per year over the same time period. This translates into just over two percent of perinatally HIV exposed births testing positive for HIV. Figure 3.19 shows number of perinatally HIV exposed births by year of birth (values on left of graph) and the rate per 1,000 live births by race of mother and year of birth (values on right of graph). The rate for 2010 is eight times higher among African-American women compared to white women.

Figure 3.19: Perinatally HIV exposed births by year of birth and rate* by race and year of birth



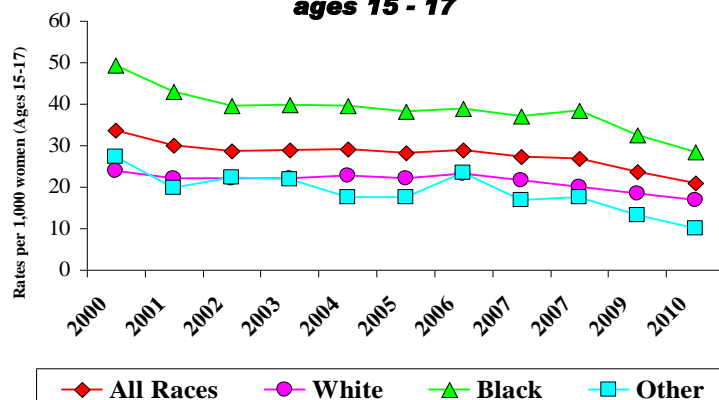
Teenage Pregnancy

Pregnancy, birth and abortion rates, like STD rates, are indications of the extent of unprotected sexual activity in a population.

African-American girls between the ages of 10 and 14 have continued to have higher rates of live births than their white counterparts. However, their rates have decreased from 2.6 in 2000 to 1.1 per 1,000 in 2011, respectively.

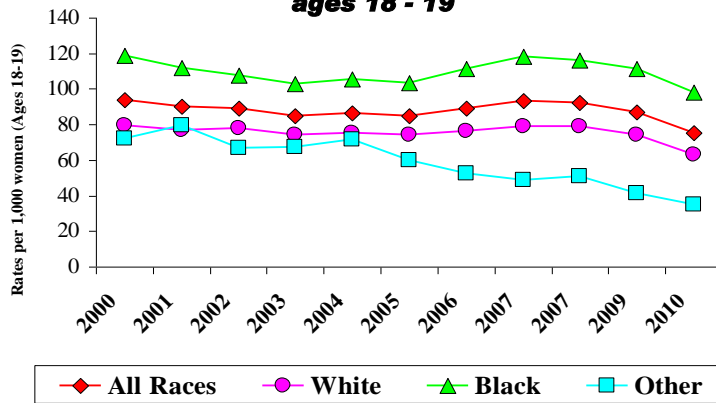
Teenage live births among 15-17 year old South Carolinians have decreased from a rate of 33.6 per 1,000 live births in 2000 to 20.9 in 2010; a 38 percent decline (Figure 3.26). This success is also seen when viewing teen birth rates by racial/ethnic subgroups. The rate for white 15-17 year old teens was 23.9 in 2000 and 16.8 in 2011, representing a 30 percent decline. The rate for African-American 15-17 year old teens declined 42 percent in the same time period from 2001 to 2011. The rate for Others is the only exception to a consistent declining trend where the rate was 27.2 in 2000, dropped to 17.4 in 2004, climbed to 23.3 in 2006 and then down again to 10.1 in 2011, representing a 63 percent decrease in the rate over the 2000 to 2011 period. This fluctuation may be due to small numbers and the trend for this subgroup requires further observation.

Figure 3.26: South Carolina teenage live birth rates, ages 15 - 17



Source – SCDHEC, Vital Records, SC Residence Data

Figure 3.27: South Carolina teenage live birth rates, ages 18 - 19



Source – SCDHEC, Vital Records, SC Residence Data

Figure 3.27 shows the teen birth rates for 18 and 19 year olds. As with the other two age groups, African-American and other teenage girls continue to have higher live birth rates between 2000 and 2011 than all races, but also as seen in the other age groups their rates have decreased from 118.9 to 98.1, 2000 and 2011, respectively.

People Receiving HIV Counseling and Testing At County Health Departments

Data from local HIV counseling and testing sites (county health departments) generally reflect similar trends as HIV/AIDS surveillance data in terms of who is most likely to be HIV infected, risk category, and county of residence. As stated in the Introduction, the data reflects only those people tested voluntarily in local health departments. This data reflects number of individuals tested, not the number of tests. In 2011, African-Americans comprised 66 percent of the total people tested, but 81 percent of the total positive. Men accounted for 34 percent of people tested but 81 percent of total positive. People 20-39 years of age represented the highest proportion tested (75 percent) and the highest proportion total positive people (67 percent). People over the age of 40 comprised 13 percent of the total people tested, and 28 percent of the total positive.

Public Health regions that accounted for the greatest proportion of people tested who were positive include those with the same urban counties of highest prevalence:

- Region 3, (includes Richland County) - 21 percent of total positives tested;
- Region 7, (includes Charleston County) – 19 percent of total positives;
- Region 4 (includes Sumter and Florence counties) – 16 percent of total positives;
- Region 5, (includes Orangeburg County) – 11 percent of total positives;
- Region 2, (includes Greenville/Spartanburg County) – 10 percent of total positives;
- Region 8 (includes Beaufort County) – 7 percent of total positives;
- Region 6 (includes Horry County) – 6 percent of total positives; and
- Region 1 (includes Anderson County) – 5 percent of total positives.

Other Behavioral/Risk Data

Behavioral Risk Factor Surveillance System (BRFSS)

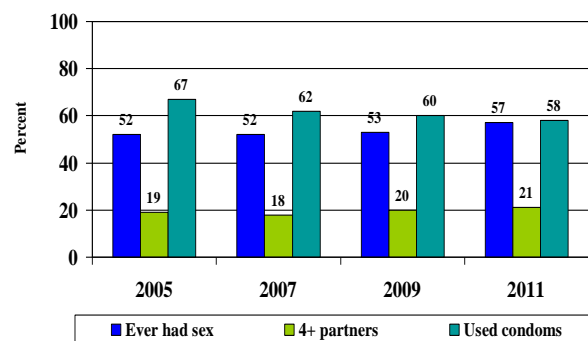
Behavior Risk Factor Surveillance System is the world's largest random telephone survey of non-institutionalized population aged 18 or older that is used to track health risks in the United States. In 1981, the Centers for Disease Control and Prevention (CDC), in collaboration with selected states, initiated a telephone based behavioral risk factor surveillance system to monitor health risk behaviors. South Carolina began administering BRFSS in 1984. Several core questions address knowledge, attitudes, beliefs, and behaviors regarding sexually transmitted diseases, particularly AIDS.

The HIV/AIDS questions for the 2010 survey focused on respondents HIV/AIDS testing history. Results show that when asked about ever being tested for HIV themselves, only 40.8 percent of respondents indicated ever being tested. African-Americans were more likely (59.9%) to have been tested than Caucasians (33.7%). Hispanics are less likely to have been tested, with only 25.1% reporting having ever been tested. Men are only slightly less likely to have been tested than women (39.5% versus 42.0%). Of those reporting having ever been tested, 14.9% reported being tested in 2010 and 59.5% reported being tested between 2005 and 2009.

Youth Risk Behavior Survey (YRBS)

The YRBS has been conducted in SC high schools every other year since 1991 and in middle schools since 2005. The survey is part of a national effort to monitor priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. Figure 3.28 shows that since 2005, the proportion of high school students who have been sexually active, and who report having had four or more lifetime partners, has remained about the same. At the same time, however, the proportion of sexually active students (had intercourse in past 3 months) reporting condom use at last sexual intercourse decreased, showing in an increased risk of exposure to HIV.

Figure 3.28: Proportion of high school students indicating sexual risks, 2005-2011



Source – SC Dept. of Education & CDC

Substance Use

Drug use is known to be a major factor in the spread of HIV infection. The Centers for Disease Control (CDC) specifically includes Injection Drug Use (IDU) as a transmission category for the classification of cases that summarizes a person's possible HIV risk factor. IDU is considered a high risk because shared equipment (primarily used needles, but also other equipment) can carry HIV, which is drawn up into a syringe and then injected along with the drug by the next user of the syringe. Sharing equipment for using drugs can also be a means for transmitting hepatitis B, hepatitis C, and other serious diseases.

Additionally, non-injecting drug use, including methamphetamine or alcohol, is linked with unsafe sexual activity, which increases the risk of becoming infected with HIV or another sexually transmitted disease. Often, substance users have multiple sexual partners and do not protect themselves during sexual activity. Also, substance users may have an increased risk of carrying sexually transmitted diseases; this can increase the risk of becoming infected with HIV, or of transmitting HIV infection.

According to the Office of National Drug Control Policy, from the 2007-2008 National Survey on Drug Use and Health, 6.7 percent of South Carolina residents reported using illicit drugs in the past month. The national average was 8.02 percent. And, 3.09 percent of South Carolina residents reported using an illicit drug other than marijuana in the past month (the national average was 3.58 percent). Additionally, according to data from the El Paso Intelligence Center's National Seizure System (EPIC-NSS), the number of meth lab seizure incidents in South Carolina increased 231%, from 26 incidents in 2007 to 86 incidents in 2009.

(Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used non-medically.)

What are the patterns of service utilization of HIV-infected people?

Ryan White Part B

In 1990, Congress enacted the Ryan White CARE Act to provide funding for states, territories and Eligible Metropolitan Areas to offer medical care and support services for people living with HIV disease who lack health insurance and financial resources for their care. Congress reauthorized the Ryan White CARE Act in 1996 and 2000 to support Titles I through IV, Special Projects of National Significance (SPNS), the HIV/AIDS Education Training Centers and the Dental Reimbursement Program, all of which are part of the CARE Act. The legislation was reauthorized again in 2006 when it became the Ryan White HIV/AIDS Treatment Modernization Act and finally in 2009 with the Ryan White HIV/AIDS Treatment Extension Act.

Ryan White Part B funding is used to assist States and Territories in developing and/or enhancing access to a comprehensive continuum of high quality, community-based care for low-income individuals and families living with HIV.

Figure 4.1: Characteristics of Ryan White Part B clients compared to S.C. persons living with HIV/AIDS in 2011

	Ryan White Part B Clients, N=9,957	Persons Living with HIV/AIDS, N=14,946
Race/Ethnicity		
White, not-Hispanic	21%	24%
Black, not-Hispanic	74%	72%
Hispanic	4%	3%
Other	1%	1%
Sex		
Male	66%	70%
Female	34%	30%
Transgender	<1%	---
Age Group		
<13	<1%	<1%
13-24	6%	5%
25-44	41%	40%
45+	52%	54%

During 2011, 9,957 clients received services through the Ryan White Part B funds. Figure 4.1 presents the distribution of Part B clients by race/ethnicity, sex and age as well as for those people living with HIV/AIDS in South Carolina through December 2011. Clients served through Part B are representative of the population affected with HIV/AIDS in all categories.

HRSA has directed that states should allocate funds for essential core services: 1) Primary Medical Care consistent with Public Health Service (PHS) Treatment Guidelines; 2) HIV Related Medications; 3) Mental Health Treatment; 4) Substance Abuse Treatment; 5) Oral Health; and 6) Medical Case Management.

Figure 4.2 shows a breakdown of Ryan White Part B clients who received six of the core services through funding and the average number of visits per clients. Utilization of HIV related medications is described in the ADAP section. Among the 9,957 clients who received services, the majority of clients obtained medical case management services (n=7,233) followed by medical care (n=5,610), mental health services (n=994), dental care (n=871) and substance abuse services (n=494).

Figure 4.2: South Carolina Ryan White Part B Service Utilization by Service Type, 2011

	No. of clients receiving service	Avg. no. of visits per client
Medical Care	5,610	5.0
Medication (ADAP)	2,890	N/A
Oral/Dental Care	871	1.9
Mental Health	994	2.7
Substance Abuse	494	3.6
Case Management	7,233	9.7

Of those services utilized most by clients (visits/clients), medical case management services were among the highest (9.7 visits per clients), followed by medical care (5.0 visits per client), substance abuse (3.6 visits per client), mental health services (2.7 visits per client), and dental care services (1.9 visits per client).

Additional services obtained by clients in 2011 included treatment adherence, counseling, food bank/home delivered meals, health education/risk reduction, referral for health care and supportive services, psychological support services, housing assistance and transportation services.

AIDS Drug Assistance Program (ADAP)

The South Carolina AIDS Drug Assistance Program (S.C. ADAP) was established under the Ryan White CARE Act to provide drugs to treat HIV disease and/or to prevent the serious deterioration of health arising from HIV disease in eligible individuals. The S.C. ADAP dispenses medications via mail order through a contracted pharmacy and operates an insurance assistance program located at the Department of Health and Environmental Control. Currently about 80 drugs are on the approved formulary. The S.C. ADAP has an advisory body of infectious disease (ID) physicians and program staff that meets annually to review the S.C. ADAP formulary and make recommendations for program improvements.

In the past, once an antiretroviral medication received FDA approval, it was automatically added to the S.C. ADAP formulary. With the new development of extremely expensive therapies, such drugs are added as appropriate after consultation with the S.C. ADAP Medical Advisory Committee. Fuzeon, Selzentry, abacavir-containing medications, pegylated interferon and ribavirin currently require prior reauthorization for approval. No restrictions or caps on the number of other antiretroviral medications per client exist.

Epidemiologic Profile

Eligibility in ADAP includes verified HIV positive status, South Carolina residency, and limited income. The financial requirement is measured according to the Federal Poverty Guidelines. Eligibility for the ADAP direct dispensing program is 300 percent of the Federal Poverty Level (FPL). Eligibility for the ADAP insurance assistance program is 550 percent of FPL. Expenditures are carefully monitored and projections are reviewed monthly.

Figure 4.3: 2011 ADAP Patient Profile Compared to Persons Living with HIV/AIDS

Profile	2011 S.C. HIV/AIDS Prevalence: 14,946	Direct Dispensing Total Served: 2,878	Insurance Program Total Served: 1,100
Male	70%	71%	67%
Female	30%	29%	33%
African American	72%	70%	65%
White	24%	22%	30%
Hispanic/Latino	3%	6%	2%

Figure 4.3 lists the characteristics of clients enrolled in ADAP during 2011. Clients served through ADAP have a similar distribution to that of people living with HIV/AIDS in South Carolina. The majority of the clients are non-Hispanic African-American (70 percent), male (71 percent) and in the 25-44 year age group.

In Care vs. Not In Care

Number and characteristics of people who know they are HIV positive but who are not receiving HIV primary medical care?

To analyze the number of people living with HIV/AIDS in South Carolina not in care, eHARS (HIV/AIDS Reporting System) data was used to review all people diagnosed through December 2011. eHARS in South Carolina is a laboratory based reporting system with all CD4 and viral load tests being reportable as of January 1, 2004. People who were deceased as of December 31, 2011 were excluded from the analysis. Only current S.C. residents were included. A person was reported as being in care if they had at least one CD4 or viral load test report from January 1, 2011 through December 31, 2011. People with no CD4 or viral report in this time frame were defined as not in care.

Figure 5.1: 2011 S.C. HIV/AIDS cases estimated not in care vs. in care (N=16,858)

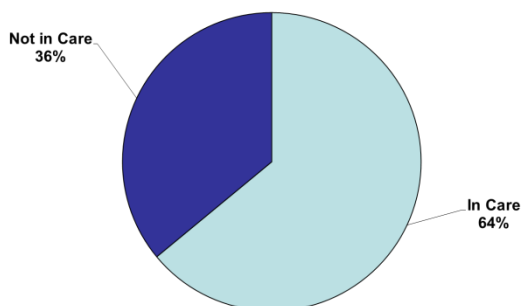
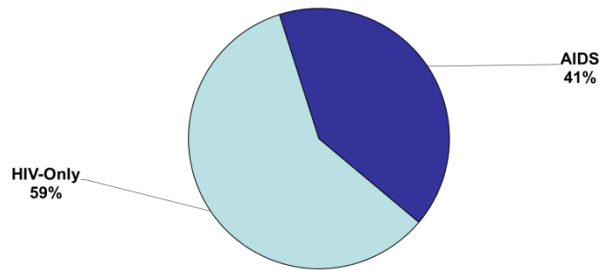


Figure 5.1 shows that of the 16,858 patients diagnosed through December 2011, 36 percent (6,128) of patients did not receive a CD4 or viral load test report within the specified time period, and therefore are reported as not in care. Sixty-four percent are defined as in care.

Epidemiologic Profile

Of the 6,128 clients not in care, 59 percent are living with HIV-only and 41 percent are living with AIDS (Figure 5.2).

**Figure 5.2: S.C. HIV/AIDS cases estimated not in care diagnosed through 2011
HIV-only vs. AIDS
(N=6,128)**



A comparison of individuals not in care by gender, shows men account for the largest percentage (73 percent); when compared by race/ethnicity, the majority (67 percent) are African-American; when compared by age groups, sixty-eight percent are between the ages of 20 and 49 (20-29 eleven percent, 30-39 twenty percent, and 40-49 thirty-seven percent). (Figure 5.3)

**Figure 5.3: S.C. HIV/AIDS cases diagnosed through 2011.
Comparison within select demographics
of individuals Not In Care**

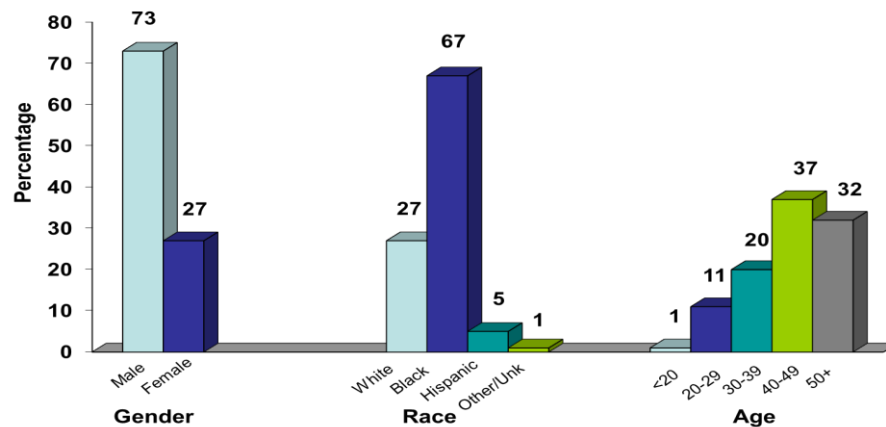
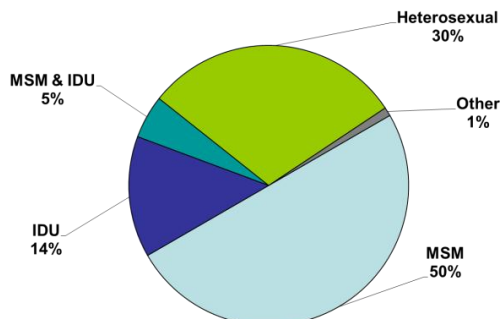


Figure 5.4: S.C. HIV/AIDS Cases NOT in care diagnosed through 2011 by mode of exposure



An analysis by mode of exposure of people living with HIV/AIDS indicates most people not in care are MSM (50 percent) and heterosexuals (30 percent) followed by IDUs (14 percent) (Figure 5.4).

Epidemiologic Profile

Figure 5.5: S.C. HIV/AIDS cases diagnosed through 2011 comparison within mode of exposure in care vs. not in care

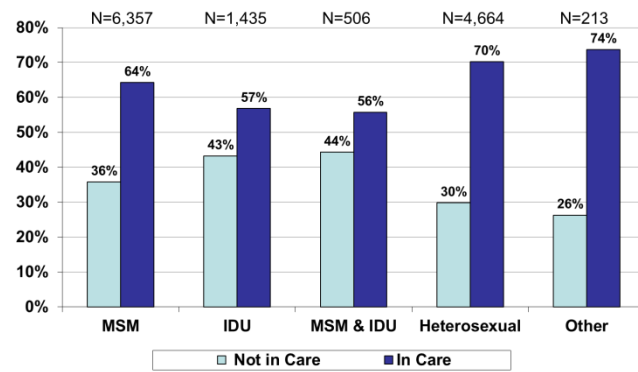


Figure 5.5 goes further to compare those in care versus those not in care within each risk category. Among all MSM living with HIV/AIDS, more people are in care (64 percent) than not in care. For people whose mode of exposure was injecting drug use (IDU), the number of those in care (57 percent) is similar to those in care whose mode of exposure was the combined risk of MSM and IDU (46 percent). Among heterosexuals with HIV/AIDS, 70 percent are in care.

The location of a person's residence may have an impact of whether or not they are in care. There are more people not in care from urban areas (71 percent) versus rural areas (26 percent) (Figures 5.6 and 5.7).

Figure 5.6: S.C. HIV/AIDS cases estimated not in care diagnosed through 2011 by location (N=6,128)

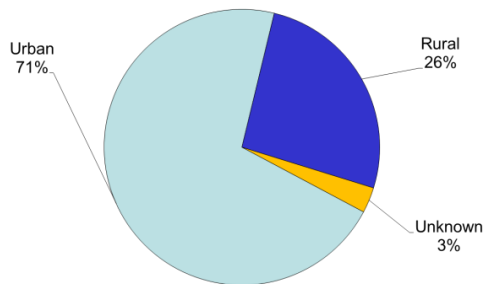
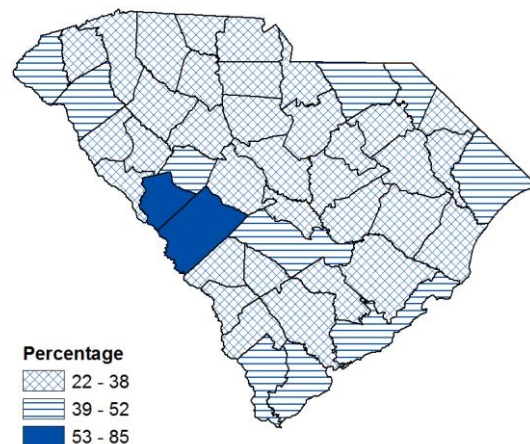


Figure 5.7: S.C. HIV/AIDS Cases Not In Care diagnosed through 2011 by County



Note: Border counties, such as Aiken and Edgefield (the two solid fill counties), may have artificially high percentages of not in care due to S.C. residents receiving care in other states, where test results are not provided to S.C.

(This page intentionally left blank)



Division of Surveillance and Technical Support
1751 Calhoun Street
Columbia, South Carolina 29201
www.scdhec.gov/health/disease/stdhiv